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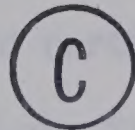
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THE UNIVERSITY OF ALBERTA
AN ECONOMIC-HISTORIC REVIEW OF THE CANADIAN
DEFENCE EXPENDITURES, 1867-1969

by



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A THESIS
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This study is primarily an economic-historic review of the Canadian defence expenditures during the past one hundred years. It

The undersigned certify that they have read, and recommend to the Faculty of Graduate Studies for acceptance, a thesis entitled An Economic-Historic Review of the Canadian Defence Expenditures, 1867-1969, submitted by Lars O.B. Hassbring in partial fulfilment of the requirements for the degree of Master of Arts.

ABSTRACT

This study is primarily an economic-historic review of the Canadian defence expenditures during the past one hundred years. A considerable amount of data has been collected from various sources among which the Public Accounts of Canada must be regarded as the most important. Estimates of the Gross National Product have been made for most years prior to 1926, with full consciousness of the numerous problems connected with such a task.

The defence expenditures, in terms of budgeted allotments to the Department of National Defence, have been analyzed in both an absolute and a relative sense. The latter basically means that the expenditures have been related to GNP and the total budgetary non-defence expenditures.

The Canadian defence outlays have fluctuated heavily over time with significant peaks during periods of war. Prior to the First World War and in the inter-war period the defence expenditures can generally be characterized as insignificant in both absolute and relative terms. Several factors have been found to contribute to the current level of expenditures, as for example the international relations, the economic strength of the nation, the level of domestic political stability, the military strategy and level of technology. Defence attitudes and policies seem to be based primarily on these considerations.

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INTRODUCTION

The first duty of the sovereign, that of protecting the society from the violence and invasion of other independent societies, can be performed only by means of a military force. But the expense both of preparing this military force in time of peace, and of employing it in time of war, is very different in the different states of society, in the different periods of improvement.¹

These words by Adam Smith, published in 1776, could as well have been said in our modern time without being subject to any greater controversy. Whether or not the primary obligation of a government is to provide protection against foreign military aggression is not a concern in this study. What is a concern is the fact that Canada for more than a century has been in uninterrupted possession of armed forces that have experienced a development that well corresponds to Adam Smith's statement from 1776. The nation has experienced times of peace, times of war, different states of society and different periods of improvements, all of which examples will be found in this study. These conditions have in various ways influenced the level of military defence and a reasonable hypothesis to make would be that the defence budget is to a large extent determined by the level of political stability and economic strength. A primary aim of this study is to give a qualitative rather than a quantitative answer to this question within the framework of an economic-historic review of Canadian defence expenditures during the past one hundred years.

The answer, however, can hardly be expected to be a simple one

¹Adam Smith, The Wealth of Nations, Vol.2, Book V, (London: Methuen and Co. Ltd., 1961), p.213.

because of interactions between a large amount of political, economic and social factors. Some of these interactions are exemplified in the study, and others are shown in a more implicit way. This study reveals briefly that causes and effects of defence expenditures vary over time in accordance with supposedly a much wider spectrum of economic and political variables than that examined in the subsequent chapters. It is hoped, however, that the most significant factors have been selected and reviewed and analyzed in a meaningful and beneficial way, with no pretention of completeness.

As a first task it might be suitable to review some of the economic characteristics of military defence within the scope of the national and public finances. The major characteristics of the two sectors of the economy are briefly examined and where appropriate directly related to the defence budget.

The terms "public sector" and "market sector" are used in various places with only brief definitions since they are assumed to be well known concepts.

In the following review it is implicitly indicated that establishing and financing of national security cannot effectively be done within the framework of the market sector of any economy. Although this cannot be proved by practical experience in modern history, it is usually assumed that economic theory and practical experience give sufficient evidence that the public sector is definitely more suited for financing a nation's military expenditures than the market sector. The latter is utilized in high degree, however, by governments in mixed economies, for the production of various defence goods and services.

CHAPTER I

A BRIEF REVIEW OF THE MIXED ECONOMY AND GOVERNMENT DECISION-MAKING

1:1 Principles of the Market Sector

The market sector in the capitalistic economies constitutes the major segment of the total economy. This means that production is basically carried on by private business firms. Production is made possible by inputs of labour and capital, purchased in the factor market for money prices. The amounts received from the sale of factors of production provide the means for buying goods and services in the product market and the amount received from selling goods and services provide the means for buying the necessary units of production factors. The basic incentives for keeping this system in continuous circulation is the desire to maximize profits as well as to maximize individual welfare. Decisions are constantly made in accordance with these goals. Resources are directed towards the kind of production which will yield the highest profit. In principle, and given high mobility, labour accepts the highest paid employment offer.

The primary regulator of the economy is the price mechanism. Supply of and demand for factors of production, finished goods, and services are closely related to the availability of resources and consumer preferences.

In a society with perfect market competition and full employment, all prices would be set according to the supply and demand situation, on an industry-wide basis, for each individual commodity. Thus, the

equilibrium price is thereby given to each single firm within the industry. Under the circumstance of perfect competition the prices of all commodities will equal their marginal cost, and the marginal social benefit from the production of each commodity is equal to the marginal social cost resulting from the production of the commodity. In the perfect market economy the optimum allocation of resources will automatically and continuously be adjusted by decisions based on the functioning of the price system. An additional condition for perfect allocation of resources is that "benefits from the consumption of the goods accrue solely to the persons acquiring them, and not to others as well".² Consequently, this means that consumer and factor-owner preferences must be regarded in their strictest sense and also under the assumption that rational behavior of the individuals is always prevailing.

If the assumptions, on which the theory of perfect competition is based, would hold, the commonly accepted goals of the economy would probably be achieved.³ John F. Due has summarized these goals in four points in the following way:⁴

1. Maximum individual freedom of choice.
2. Optimum levels of living, in terms of available resources, and consumer and factor-owner preferences.

²John F. Due, Government Finance, (Homewood, Illinois: Richard D. Irvin, Inc., 1963), p.8.

³See C.E. Ferguson, Microeconomic Theory, (Homewood, Illinois: Richard D. Irvin, Inc., 1966), pp.192-195.

⁴John F. Due, op. cit., p.7.

3. Attainment of the desired rate of economic growth.
4. Distribution of income in conformity with currently accepted standards of equity.

The existence of public involvement in the market economy is a result of departures from rational behaviour and perfectionism, which, in turn, largely depend upon discrepancies in mental and physical abilities among individuals. Much of the gap between theory in this context and reality has to be filled in by public economic actions. Most of the failures of the market sector to provide welfare and security to individuals have induced governments to take over these responsibilities in various ways. In very broad terms it can be said that the governmental sector of the economy tries to satisfy public wants by providing goods of collective nature through the decisions made by the elected representatives in the political bodies. In a somewhat narrow sense, public wants are those wants that can be satisfied through the provision of public good or collective good which in one place is defined as:

"...a good of a type that can be consumed by an additional individual without any significant reduction in the amount available to the original consumers."⁵

This definition refers to what can be called "pure public goods" where national defence, police protection, and fire protection are

⁵ Mancur Olson Jr. and Richard Zeckhauser, "Collective Goods, Comparative Advantage, and Alliance Efficiency", in Issues in Defense Economics, ed. by Roland N. McKean, National Bureau of Economic Research, (New York: Columbia University Press, 1967), p.26.

mentioned as typical examples.⁶ Thus for the purpose of this study, the above quotation is relevant and precise, but does not cover the general concept of the public sector, which is briefly explained in the next section.

1:2 Principles of the Government Sector

It was realized long ago that the principle of "laissez-faire" could not be allowed to develop in an unrestricted way. Governments continuously imposed new legislation in order to regulate the degree of utilization, distribution, and allocation of resources which were discovered to be scarce. Both the economic and social well-being of the citizens have become major concerns of the governments, enforcing new types of legislation and changes in existing legislation both as far as revenue sources and expenditures are concerned. All of this is supposed to serve the same purpose, that is, to create reasonable economic equity among the citizens.⁷

As mentioned previously, the government sector constitutes a lesser part of the total economy in all capitalistic countries, if expressed in pure monetary terms. The total impact of the governmental sector, taking into account the potential legislative power, is supposedly far greater

⁶"Public wants" in this limited sense is labeled "Social wants" by Richard A. Musgrave and defined as follows, "Social wants are those wants satisfied by services that must be consumed in equal amounts by all." Richard A. Musgrave, A Theory of Public Finance, (New York: McGraw-Hill Book Co., 1959), p.8.

⁷See for example E.J. Benson, Minister of Finance, Proposals for Tax Reform, (Ottawa: Queen's Printer, 1969), pp.6-7 where the official aims are explicitly stated.

than its directly measureable share of the economy. The means of assessing total governmental economic power are limited and uncertain but at least it can be said that the public sector is fairly constantly expanding in Western countries. One writer has pointed out that:

Fundamentally, the development of government is part and parcel of the whole process of economic growth...., the expansion of government activities has been, and continues to be, more a matter rooted in technological than in ideological factors.⁸

It is very well known that governments not only produce goods and services. By legislative means they have the power to distribute and redistribute income which affects the allocation of resources between the private and public sector. Various fiscal and monetary measures are used to stabilize the economy and to create as high a degree of employment as possible, as well as to assess and support suitable economic growth. One of the primary regulators is the budget and the defence budget has proved from time to time to have an important effect on the aggregate economy and in particular the private sector.

The immediate economic importance of governments can always roughly be measured through the means of their budgets. The size of the budget can be related to the level of national income for the sake of comparison with previous years or other countries.

The governmental production of goods and services is a direct result of the failure of the market sector to provide products efficiently that are not subject to the price mechanism of this sector. The underlying

⁸Eric J. Hanson, The Public Finance Aspects of Health Services in Canada, Royal Commission on Health Services, (Ottawa: Queen's Printer, 1963), p.7.

wants are often referred to as "public wants" of which there are two major types according to Musgrave, namely, "social wants" and "merit wants".⁹

Social wants are those wants that cannot at all be satisfied through the market mechanism. The services provided as a result of social wants must be consumed in equal amounts by all and the satisfaction derived from them by any individual is independent of his own contribution. Among the best examples of a social want is the subject of this study-- military defence. National defence is provided in such a way that it must be consumed in equal amounts by all. The individual's financial contribution is not determined by his preference system and thus the satisfaction derived from military protection is independent of the contribution. The same is valid for all public goods and services induced by social wants. Other examples of goods and services resulting from social wants are compulsory vaccination programs, installation of public parks and monuments, police and fire protection, the judiciary system, etc. All these contribute to the welfare of the whole society. It is commonly accepted in developed economies that every individual, in equal amounts and regardless of contributory power, deserves the right to consume governmentally provided goods and services induced by social wants. Naturally, this varies as to amounts and standards from one legislative area to another, depending upon a variety of factors, of which political and economic systems and level of economic achievement are important elements.

⁹Richard A. Musgrave, op. cit., pp.6-14.

The other part of the public wants concept is merit wants. These are not as well defined and distinguishable as the social wants. Merit wants are clearly and conceptually separated from private wants even though they could be more or less satisfied through the market mechanism. However, the border line between social and merit wants is not always distinct. If goods and services induced by merit wants were handled by the market sector, they would by definition be subject to what is often called the exclusion principle or dollar-voting.¹⁰

R.A. Musgrave defines this principle in the following way:

If a consumer wishes to satisfy his desire for any particular commodity, he must meet the terms of exchange set by those who happen to possess this particular commodity, and vice versa. That is to say, he is excluded from the enjoyment of any particular commodity or service unless he is willing to pay the stipulated price to the owner.¹¹

Most merit wants have originated in the private sector and being found so meritorious that their satisfaction has been decided to be provided for through the public budget. This usually means that the consumer gets an option to use either the public service or the service provided by the market sector. Typical examples are education, subsidized transportation systems, free school lunches, public health care programs, free dental care, etc.

The distinction between merit and social wants is of little importance for the remainder of this study. It has been established that these sets of wants together constitute public wants and this

¹⁰Ibid., p.9.

¹¹Ibid., p.9.

latter term will be used onwards. It has also been laid down that armed forces and their expenditures are induced by prime social wants, and are regarded as pure public goods.¹²

1:3 Marginal Decision-Making

It has for a long period of time been of vital importance and great concern to any government to optimize available resources for the benefit of the whole economy as well as for each individual. The public sector is part and parcel of the total economy and the government is directly responsible for this sector by its sovereignty. Optimum allocation of the total also implies optimum allocation of its parts and thus the governmental sector of the economy must be subject to the process of maximizing its welfare function. The "welfare function" as shown below is stated in a very general form and can easily be applied to the economy of the public sector and equally well to an industry or the total economy.

$$MTC = MIC = MIB = MTB$$

This simply means that when optimum allocation of resources is reached at any moment in time there is an equalization between Marginal Total Cost (MTC), Marginal Individual Cost (MIC), Marginal Individual Benefit (MIB), and Marginal Total Benefit (MTB).¹³ Needless to say,

¹²For a considerably more detailed discussion on public goods see for example the following studies: Paul A. Samuelson, "The Pure Theory of Public Expenditure", The Review of Economics and Statistics, November 1954, and "Diagrammatic Exposition of a Theory of Public Expenditure", The Review of Economics and Statistics, November 1955 and "Aspects of Public Expenditure Theory", The Review of Economics and Statistics, November 1958, and Albert Breton, "A Theory of the Demand for Public Goods", Canadian Journal of Economics and Political Science, November 1966.

¹³Roland N. McKean, Public Spending, (New York: McGraw-Hill Book Company, 1968), p.24.

this is a state of affairs that is extremely difficult to achieve and even if it were achieved, nobody could really tell since the total set of indicators is neither available nor measureable. To ascertain an equilibrium position of this kind requires much more data than is available in practice, and it might suffice to point out the great difficulty involved in transforming marginal benefit in terms of satisfaction into monetary terms. Apart from the latter and in terms of the aggregate economy, the importance of the presently significant defence budget as a resource allocator cannot be overlooked. A large part of the budget is allocated to the market sector for purchases of goods and services and thus the defence budget serves as an inducement to the overall economy.

If the assumption is made that programs and activities, among which resources are allocated within the public sector, are induced by public wants, the following question occurs -- how does the government ascertain these wants and how are the consumers preferences ordered? This big problem cannot be answered within the scope of this study but since military defence is an integral part of the social welfare function and a vital item in the federal budget some attention will be given to the budget decision process in general and to decision-making on defence spending in particular.¹⁴

Each government possesses, or establishes, to its disposition a political machinery by which help decisions are made, and programs and

¹⁴See Anthony Downs, An Economic Theory of Democracy, (New York: Harper Brothers, 1957), 310 pp. where the function of government and its decision-making behaviour are examined in depth.

activities are prepared and carried out.

All budget decisions are made within the hierarchy constituted by this political machinery. The traditional economic theory assumes that the social function and private motive of government both consist of maximization of social utility or social welfare. Downs' hypothesis is that "government's social function is not identical with its private motive" and he specifies only the latter, "which is the maximization of votes instead of utility or welfare".¹⁵ Furthermore he introduces the "concept of marginal operations" with the implication that the newly elected or reelected government "makes only partial alternations in the scheme of government activities inherited from the preceding administration; it does not recreate the whole scheme".¹⁶

This non-traditional theory of the government decision process is brought to attention in this study since it is believed to be particularly relevant to decision-making on defence expenditures. This does not, however, exclude the relevance of the more traditional theory since the two basic theories do not fully exclude each other.

The defence budget is determined by a multitude of factors of which several will be examined in the subsequent chapters. One of these factors is assumed to be the decision-makers' consideration given to the effect on the electorate of alterations in the defence budget. This question can more accurately be isolated if the assumption is limited to times of relative stability in the international relations. In a very

¹⁵ Ibid., p.51.

¹⁶ Ibid., pp.52-53.

simplified manner it can be said that the consideration whether to increase or to decrease the budget is centred around the question--what optimizes the number of votes? Neither alternative is constantly better than the other since the electorate's expected reaction is dependent upon the envisaged effects, that vary from time to time, of either action. A spending cut-back in an inflationary economy is feasible and because of that it is vote-gaining whereas the optimization of the gain is a matter of degree of the cut-back. This situation is experienced at present. In times when the economy is slacking the opposite would be true and some evidence of this in more recent years is presented in this study. It is necessary to keep in mind that what is discussed here are marginal alterations in the budget. In a reasonably well balanced economy these marginal changes can have considerable effects. The core of the defence budget is based on more concrete considerations by political, military and technical experts. These considerations are supposedly to a large extent accepted in good faith by both the government and the parliament and decisions are made accordingly.

It seems as if Downs' theory of government's marginal operations has some bearing as far as the defence budgets are concerned, at least during specific periods in the Canadian history. The periods in concern are the inter-war period and the post-World War II period. No further specific attention will be paid to this facet of decision-making since it is felt, from the economic-historic point of view, to have played a minor role in determining the level of defence expenditures.

1:4 Summary

Any mixed economy consists of a market sector and a public sector. Measured in monetary terms the market sector is the larger of the two although a clear long-run trend of faster growth of the public sector is prevailing. The potential power of the public sector is far greater than what is directly assessable. Governments have the power to allocate and reallocate resources through the means of legislation and budgets. The defence budget has been mentioned as an example of a regulative mechanism.

Since national defence is clearly a pure public good it cannot be provided for by the market sector. No such good can be subject to the price mechanism of the market sector since they are made available on the grounds of needs rather than ability to pay.

Anthony Downs' theory of marginal operations of government has been loosely applied to the decision-making on defence expenditures and a possibility of evidence in certain periods has been qualified. It has also been stated that the core of the defence budget is determined by a variety of factors of political, economical and technical nature, several of which will be reviewed in the subsequent chapters.

CHAPTER II

FRAME WORK, DATA DESCRIPTIONS AND DEFINITIONS

2.1 Introduction

Regarding Canada as a dominion or nation this study covers the longest period of time possible. That is slightly over 100 years, from July 1, 1867, the date of Confederation, to approximately the second quarter of 1970.

It might easily be said that such a period is too long to be covered in a project of this nature. This argument would be valid if restrictions and limitations are imposed, both explicitly and implicitly stating the word "cover". This term can briefly be explained by some of the general characteristics of the study. Firstly, it can be regarded as an economic-historic review of defence or military spending. Secondly, it is an extensive exercise in data collection and compilation. Thirdly, it lays a foundation for further analysis and expansion that naturally can be done by the present author as well as by others.

These characteristics clearly indicate that the study is extensive rather than intensive. It is extensive in terms of the amount of data presented and, as mentioned, the period of time covered. An extensive presentation of data over time combined with relevant, although not exhaustive analysis, is more of a contribution than is an intensive analysis of events over a short period of time. This can evidently not be made a general rule, but it is valid for the field handled in this study. The approach taken has been a matter of choice since both aims,

that is extensiveness and depth, could not possibly be accomplished given the physical restraints in terms of time and scope. This statement does of course not exclude the analysis to go into some depth in certain periods and especially during more recent years. So, it must conclusively be established that this study is not by any means a complete analysis of the economics or the economic and social implications of defence expenditures in Canada or elsewhere. It does, however, clearly point out the absolute magnitude of these outlays as well as the relative size determined by various combinations with other economic variables and population size.

There is a considerable number of studies being undertaken in the field of defence economics. Only a fraction of the available literature has been utilized and referred to in this work. The major reason for this is two-fold. Firstly, a majority of the studies have been done in the United States with narrow application to that nation or to a "super power" situation. Secondly, the approach is usually different from the one taken in this study. Research in the economics of military defence is to a large extent concentrated on analysis of the post-war nuclear power structure, where middle-sized and small nations are given minor importance. Generally speaking, either of two approaches is followed. The one is the economic justification for a military economy, assuming away or deflating the ethical and moral factors. The other approach presents the arguments for the economics of disarmament, either including or excluding the morality in deescalating armed forces to zero level or close to it.

This chapter introduces all the basic data for the whole study

period or the maximum part thereof for which they are applicable. In some instances sources are described and definitions are stated where deemed necessary. Critical comments and short discussions deal with the degree of consistency and reliability of available figures. Some estimations have been made and the methods that are used are explained.

2.2 Data Description and Definitions

All original information in data-form is contained in Table 1. This is the basis for the whole study and needless to say, eventual undiscovered and faithfully treated defects in the sources of this information are necessarily reflected in the analysis and over-all review. The data are not analyzed in this part of the study but are taken care of in the subsequent chapters. All compilations are based on these data, if not otherwise stated, and constitutes an integral part of the text of the following chapters. New data are occasionally brought into the analysis but bear mostly such a close relationship to the original data, as presented here, that they are explained in their proper context.

All financial data in Table 1 are given in current dollars with no consideration given to the real value of the dollar at any time.

Calendar and Fiscal Year. A primary consideration in the initial stage of the study was the problem with two different financial years with figures for GNP consistently given per calendar year. The federal fiscal year end was changed from 30 June to 31 March in 1907 and the fiscal year has stayed unchanged since that time.¹ The problem was whether or not to

¹M.C. Urquhart and K.A.H. Buckley, Historical Statistics of Canada, (Toronto: The McMillan Company of Canada Ltd., 1965), Footnote p.201

TABLE I

PRINCIPAL STATISTICS ON DEFENCE EXPENDITURES, FEDERAL EXPENDITURES,
GROSS NATIONAL PRODUCT AND POPULATION
CANADA 1867-1969 (Millions of Current Dollars)

Year	Defence Expenditures	Veterans Benefits	Total Federal Budgetary Expenditures	Gross National Product (GNP)	Population (Thousands)
1867	0.8	Nil	13.7	417	3,463
1868	0.9	"	14.5	N.A.	3,511
1869	1.2	"	17.9	"	3,565
1870	0.9	"	18.9	448	3,625
1871	1.7	"	25.2	461	3,689.3
1872	1.3	"	38.6	387	3,754
1873	1.3	"	33.0	426	3,826
1874	1.1	"	32.3	513	3,895
1875	1.1	"	31.1	496	3,954
1876	0.6	"	31.6	500	4,009
1877	0.6	"	29.5	513	4,064
1878	0.8	"	29.6	506	4,120
1879	0.8	"	32.8	591	4,185
1880	0.8	"	32.6	658	4,255
1881	0.9	"	33.4	736	4,324.8
1882	0.8	"	41.6	730	4,375
1883	1.1	"	56.5	717	4,430
1884	2.8	"	47.6	789	4,487
1885	4.5	"	60.2	874	4,537
1886	1.6	"	39.9	789	4,580
1887	1.9	"	43.1	791	4,626
1888	1.4	"	41.8	831	4,678
1889	1.4	"	39.9	811	4,729
1890	1.4	"	38.9	831	4,779
1891	1.4	"	40.2	936	4,833.2
1892	1.5	"	38.7	915	4,883
1893	1.4	"	40.9	890	4,931
1894	1.7	"	40.9	885	4,979
1895	2.2	"	42.0	933	5,026
1896	2.6	"	40.9	1,023	5,074
1897	1.8	"	43.0	889	5,122
1898	2.6	"	49.0	1,052	5,175
1899	3.6	"	50.2	1,008	5,235
1900	3.2	"	55.5	1,053	5,301
1901	2.8	"	61.4	1,178	5,371.3
1902	2.6	"	59.1	1,286	5,494
1903	3.7	"	69.1	1,346	5,651
1904	4.2	"	76.5	1,393	5,827
1905	5.7	"	81.0	1,523	6,002

Continued...

TABLE I (Continued)

Year	Defence Expenditures	Veterans Benefits	Total Federal Budgetary Expenditures	Gross National Product (GNP)	Population (Thousands)
1906	4.4(b)	Nil	64.6(b)	1,637	6,097
1907	6.9	"	110.3	1,671	6,411
1908	6.5	"	131.5	1,797	6,625
1909	6.1	"	113.9	2,061	6,800
1910	9.2	0.1	121.6	2,160	6,988
1911	9.7	0.1	136.0	2,432	7,206.6
1912	11.4	0.1	143.1	2,564	7,389
1913	13.5	0.1	184.9	2,874	7,632
1914	72.4	0.7	246.4	2,786	7,879
1915	172.5	0.8	337.9	3,052	7,981
1916	312.0	2.8	496.7	3,374	8,001
1917	343.8	8.2	573.5	3,988	8,060
1918	438.7	30.2	695.6	4,490	8,148
1919	346.6	74.6	740.1	5,102	8,311
1920	30.2	76.1	528.9	5,573	8,556
1921	17.5	56.1	476.3	4,369	8,787.9
1922	14.2	48.0	441.2	4,649	8,919
1923	13.4	45.1	371.8	4,818	9,010
1924	13.2	45.1	352.2	4,692	9,143
1925	14.1	46.1	355.6	4,809	9,294
1926	14.8	46.0	359.2	5,146	9,451
1927	17.6	61.9	379.8	5,561	9,637
1928	19.6	63.2	394.1	6,050	9,835
1929	21.8	50.1	405.3	6,139	10,029
1930	23.4	57.0	441.6	5,720	10,208
1931	17.9	61.6	448.7	4,693	10,376.8
1932	13.5	55.9	532.4	3,841	10,510
1933	13.2	55.1	458.2	3,492	10,633
1934	13.9	54.6	478.1	3,969	10,741
1935	17.2	55.1	532.6	4,301	10,845

Continued...

TABLE I (Continued)

Year	Defence Expenditures	Veterans Benefits	Total Federal Budgetary Expenditures	Gross National Product (GNP)	Population ^(c) (Thousands)
1936	21.3	56.8	532.0	4,634	10,950
1937	32.4	55.2	534.4	5,241	11,045
1938	34.1	55.6	553.1	5,272	11,152
1939	131.6	58.2	680.8	5,621	11,267
1940	752.3	58.6	1,249.6	6,713	11,381
1941	1,340.3	59.1	1,885.1	8,282	11,506.7
1942	3,729.2	66.9	4,387.1	10,265	11,654
1943	4,588.7	71.5	5,322.3	11,053	11,795
1944	4,418.9	114.1	5,245.6	11,848	11,946
1945	4,003.0	401.7	5,136.2	11,863	12,072
1946	387.6	604.8	2,634.2	11,885	12,292
1947	196.0	336.6	2,195.6	13,169	12,551
1948	268.8	276.9	2,175.9	15,127	12,823
1949	384.9	246.4	2,448.6	16,300	13,447
1950	728.4	216.4	2,901.2	17,955	13,712
1951	1,447.4	216.0	3,732.9	21,060	14,009.4
1952	1,972.9	241.4	4,337.3	24,042	14,459
1953	1,857.8	238.7	4,350.5	25,327	14,845
1954	1,688.0	240.1	4,275.3	25,233	15,287
1955	1,768.6	248.5	4,433.1	27,895	15,698
1956	1,783.6	251.5	4,849.0	31,374	16,080.8
1957	1,687.4	277.2	5,087.4	32,907	16,610
1958	1,442.4	288.8	5,364.0	34,094	17,080
1959	1,538.5	288.3	5,702.9	36,266	17,483
1960	1,541.0	292.3	5,958.1	37,775	17,870
1961	1,653.1	333.2	6,520.6	39,080	18,238.2
1962	1,603.8	335.6	6,570.3	42,353	18,583
1963	1,734.4	333.7	6,872.4	45,465	18,931
1964	1,585.7	353.0	7,218.3	49,783	19,291
1965	1,595.2	369.7	7,724.8	54,897	19,644
1966	1,695.9	390.8	8,779.7	61,421	20,014.9
1967	1,888.8	400.8	9,824.1	65,608	20,405
1968	1,790.7	427.6	10,767.2	71,454	20,744
1969	1,878.1(a)	421.2(a)	11,650.0	78,169(a)	21,061

N.A. = Not Available

Footnotes:

- (a) Estimates
- (b) Federal fiscal year end was changed from 30th June to 31st March in 1907 so 1906 figures are for nine months only.
- (c) Including Newfoundland from 1949

TABLE I (Continued)

Sources:

For column 1-3, period 1867-1935: M.C. Urquhart - K.A.H. Buckley (eds.), Historical Statistics of Canada, (Toronto, The MacMillan Company of Canada Ltd., 1965) Series G26-44, pp.200-203.

Period 1936-1967: Public Accounts of Canada, Annually 1937-1968

Period 1967-1969: Canadian Tax Foundation, The National Finances, 1969-70, (Toronto, October 1969) pp.70-71 and 97.

For column 4, period 1870-1920 (selected years): Urquhart - Buckley op. cit., p.141 and O.J. Firestone, Canada's Economic Development, 1867-1953, Income and Wealth Series VII (London, Bowes and Bowes, 1958) Table 10, p.66 and Table 87, p.276.

Period 1926-1968: DBS, System of National Accounts, National Income and Expenditure Accounts, 1926-1968. (Ottawa, August 1969)

For column 5, DBS, Vital Statistics, Cat. No.84-202 (Annual), 1958 and 1967, Estimated Population for Canada and Provinces, Cat. No. 91-202, (Annual) 1968 and 1969.

adjust the two years to each other. There are several factors that have led to the decision not to adjust either series. Firstly, national accounts calculated on a quarterly basis have been published only since 1953. Secondly,

...their preparation on a reliable and analytically useful basis is rather more difficult because of the scarcity of quarterly data, special problems arising from the measurement of farm production and problems in connection with seasonal variation.²

Thirdly, the recent revision of the Canadian National Income and Expenditure Accounts for 1926-1968, released on September 4, 1969 gives only annual data.³ Fourthly, there would be considerable difficulties to present evidence that time-adjusted data series in this context are superior to unadjusted ones. If GNP figures were to be adjusted to a fiscal year basis, they would, previous to 1953, by necessity have been subject to some form of estimation procedure, involving a quarterly distribution of GNP data. Fifthly, the error that eventually results from some combination of the two different financial years is likely to be systematic and consequently not affecting a time series analysis to any serious extent.

Thus, in Table 1, GNP figures are given on a calendar year basis and the remaining national accounts data are based on fiscal years. Further, it must be pointed out that the double-year notation of the

²DBS, Canada Year Book 1957-58 (Ottawa: Queen's Printer, 1958), p.120.

³DBS, Canadian Statistical Review, Weekly Supplement, Catalogue No. 11-004 (Ottawa: September 4, 1969).

fiscal year has been changed to a single-year notation. The year named is the year containing the major part of the fiscal year.

Historical Data. All figures for the period previous to the year 1936 are by definition regarded as historical data. The analysis in the subsequent chapters is divided into two major parts - "The Historic Period", 1867-1935 and "The Modern Period", 1936-1969, for reasons that are explained more in depth in Chapter III.

All historic data regarding public finance, with the exception of GNP data from the year 1926 and those estimated by the present author, are taken from Urquhart-Buckley, Historical Statistics of Canada. Some minor improvements have been made according to the latest official revisions of some data. The mentioned statistical source is regarded as very reliable in reference to the original sources. Cross references with the Public Accounts of Canada have been carried out for scattered years between 1867 and 1936 in a somewhat random manner. Some minor discrepancies between original data and those presented by Urquhart-Buckley have been found in regard to defence expenditures. An attempt is made below to explain these differences as well as similar inconsistencies in the following period.

Data of the Period 1936-1970. All data for this period except GNP and population figures are taken from the Public Accounts of Canada, either in finalized or preliminary form. It has, for this period, been judged as more appropriate to use primary sources, even though Urquhart-Buckley provide the same set of information up to and including the year 1960. However, major discrepancies have been found concerning military expenditures between the Public Accounts and the Urquhart-Buckley data

in the period 1941-1945. This is most likely due to a series of definitional problems peculiar to the war-time economy.

Defence Expenditures. Table 1 shows an unbroken series of data on defence outlays for the whole study period. These expenditures are for most of the years well defined and, broadly speaking, consist of national defence outlays and defence aid to other countries. They include both current and capital expenditures, but not debt retirement. Further, the data of this series exclude all expenditures from funds outside the budget such as unemployment insurance, old age security and national defence equipment account.⁴ The latter was a separate account that existed for seven consecutive years (1952-1958). It is logical to exclude this account from defence costs according to the following short definition of its purpose,

National defence equipment account was credited with the value of defence materials and supplies transferred to members of the North Atlantic Treaty Organization, which credits could be used in subsequent years to purchase equipment and supplies for the Canadian forces.⁵

This account ranged from a deficit of 14.2 million dollars in 1952 to a surplus of 211.7 million dollars in 1958.⁶

The major source for the Urquhart-Buckley data collection in this respect has been the Public Accounts of Canada that is published con-

⁴M.C. Urquhart, K.A.H. Buckley, op. cit., p.189.

⁵Ibid., p.189 (for a more detailed statement see Public Accounts of Canada, Part 1 - Survey and Financial Statements, 1956, p.35).

⁶Ibid., p.202.

secutively since the year of Confederation. A cross examination of the sources for some years between 1867 and 1935 has clearly shown that national military expenditures were entirely borne by the Department of Militia and Defence. However, the Buckley-Urquhart figures are consistently slightly higher than those budgeted for the Department of Defence during the historic period. The difference can most likely be explained by expenditures for military aid to foreign countries, administered and paid by some other department. In relative terms, the difference rarely exceeds the five per cent limit, and does not by any means invalidate the analysis. This discrepancy is not defined in the Urquhart-Buckley volume. The defence aid programs have later come under the authority of the Department of Defence and thus, consistency in the data series is ascertained even though the data for the latter part of the study period are extracted differently, that is, directly from the primary source.

The war years 1939 to 1945 constitute from a data point of view, a special problem that is very much a matter of judgement. Urquhart-Buckley show a different set of data for those years, steadily lower than what is presented in this study. It is not at all clear how the Urquhart-Buckley figures have been derived since no explanation is submitted to this particular series. This problem is of little importance since the present author has preferred to use, what in the Public Accounts is called, "war expenditures". Although "The distinction between 'war' and 'non-war' is arbitrary, 'war expenditures' means charges to The War Appropriation Acts and 'non-war' means all other expenditure"⁷ the

⁷Public Accounts of the Dominion of Canada, 1945, footnote, p.XVIII.

present author is convinced that the higher figures shown in Table 1 better reflect the extraordinary expenditures induced by the world conflict than do the data of Urquhart and Buckley. The decisive argument for this is that even the "non-war" expenditures, that is, the total federal budgetary expenditures less charges to The War Appropriation Acts, show far more than a "normal" rate of increase, which ought to indicate that the data used in this study, concerning war expenditures, are not excessive.

Veterans' Benefits. This account was officially established in 1916 even though direct payments to individuals are recorded annually from the fiscal year 1910-11.⁸ Veterans' benefits include payments for veterans' pensions and assistance, and hospitalization.⁹ A veteran is the person who has served, generally with the Canadian armed forces, either in a war, being it a world war or a more local conflict, or a peace-keeping military operation.¹⁰

Total Budgetary Expenditures. This series needs relatively little explanation. There is full correspondence between the Urquhart-Buckley data and those presented in the Public Accounts of Canada in this matter. The series dates back to the year 1867 and is uninterrupted over the whole study period. All budgetary items in the Public Accounts exclude expenditures from funds outside the budget but include both current and capital expenditures in accordance with what is stated above regarding

⁸Canadian Tax Foundation, The National Finances 1968-69, (Toronto: Canadian Tax Foundation, 1968), p.85.

⁹M.C. Urquhart, K.A.H. Buckley, op. cit., p.189.

¹⁰Canadian Tax Foundation, op. cit., p.85.

defence expenditures. Thus, this total reflects, in a limited sense, the extent of federal government economic activity. Because of this and its degree of consistency over time it serves as one of the primary basis to which defence expenditures are related. The term non-defence expenditures is used in the analysis and has the evident meaning of total federal budgetary expenditures less outlays for military defence.

Gross National Product. An uninterrupted official series of GNP-figures exists from the year 1926. As mentioned earlier this series is newly revised on the basis of, among others, the results of the 1961 Censuses, new data from tabulations of taxation returns, and improvements in statistical methods and procedures.¹¹ These revisions have resulted in an upward shift of all previous GNP figures. The changes were minor up to the year 1951 and of greater significance thereafter.

Since GNP data commonly are used as a major means of measuring a country's economic standard, the defence expenditures have been related to the GNP basis. Obviously this makes any international comparison easier and more relevant.

Of the existing methods of calculating GNP only the two most frequently used are briefly exemplified here in conjunction with a single year comparison between the "old" and revised figures. This gives an approximate measure of the magnitude of the difference as well as it indicates where major parts of the difference lie.

¹¹DBS, Systems of National Accounts, National Income and Expenditure Accounts, 1926-1968, (Ottawa: August, 1969), p.5.

The two methods listed below are the income and expenditure approaches, officially used and published in Canada. A very general and simple definition of GNP may be that it represents the sum of all goods and services produced in an economic area during a given period of time.¹² The accuracy of GNP and its components as well as the relevancy of using this aggregate as an economic standard measure for the period 1926-1969 is not further discussed in this study.

¹²Andre Raynau, The Canadian Economic System, (Toronto: The MacMillan Company of Canada Limited, 1967), p.5.

TWO APPROACHES TO THE GROSS NATIONAL PRODUCT
CANADA 1963, MILLIONS OF DOLLARS

I. Expenditure Approach

1. Personal expenditure on consumer goods and services
2. Government expenditures on goods and services
3. Business gross fixed capital formation
4. Value of physical change in inventories
5. Export of goods and services
6. Import of goods and services
7. Residual error of estimate
- GROSS NATIONAL PRODUCT AT MARKET PRICES

1963	1963 (Revised)
27,230	28,364
8,076	7,149
7,495	9,522
459	592
9,054	9,102
-9,542	-9,562
235	298
43,007	45,465

II. Income Approach

1. Wages, salaries, supplementary labour income
2. Military pay and allowances
3. Corporation profits before taxes
4. Rent, interest, and miscellaneous investment income
5. Accrued net income of farm operators from farm production
6. Net income of non-farm unincorporated businesses
7. Inventory valuation adjustment
8. NET NATIONAL INCOME AT FACTOR COST
9. Indirect taxes less subsidies
10. Capital consumption allowances and miscellaneous valuation adjustments
11. Residual error of estimate
- GROSS NATIONAL PRODUCT AT MARKET PRICES

1963	1963 (Revised)
21,550	23,057
598	670
3,327	4,430
3,025	1,534 ^{a/}
1,786	1,538
2,451	3,073 ^{b/}
-184	-202
32,553	34,100
5,565	5,714
5,124	5,948
-235	-297
43,007	45,465

a/ Excludes rents

b/ Includes rents

Sources: A. Raynald, op.cit., pp.10-15.
D.B.S. Weekly Supplement, op. cit., pp.4-6.

The period prior to 1926 is considerably different from the one previously discussed as far as GNP data are concerned. No official figures are available and those published are estimated on necessarily much less firm ground than those published for the years after 1926. They also become less firm the farther back they are carried.¹³ The GNP-data for the period prior to 1926 as presented in Table 1 are estimates by the present author. These estimates are founded on O.J. Firestone's series of GNP-figures in constant 1935-39 dollars for 1867 and annually 1870-1953.¹⁴ The fact that these data are given in constant dollars creates numerous problems and uncertainties as far as the conversion of the data into current dollars is concerned. This is, however, a necessary operation to undertake since all other financial data are given in current dollars, and relative measurements is a major concern in this study. The same author provides for selected years, a series of price indexes, that apparently, in the same study, has been the basis for converting a series of unadjusted Gross National Expenditure data in current dollars into constant dollars.¹⁵ Since this series of price indexes most likely is independently developed it is assumed to be applicable to the mentioned series of adjusted Gross National Product data. According to these price index data, the real value of the dollar prior to the first world war was higher than the 1935-39 dollar. Fluctuations, at least in composite prices, were minor and the GNP-estimates prior to 1914 in this

¹³Urquhart-Buckley, op. cit., p.128.

¹⁴O.J. Firestone, Canada's Economic Development, 1867-1953, Income and Wealth Series VII, (London: Bowes and Bowes, 1958), Table 87, p.276.

¹⁵Ibid., Table 10, p.66.

study must be regarded as nearly as reliable as the original Firestone estimates.

It might be pointed out here that the estimated GNP-figures in this study do not coincide with those presented for selected years prior to 1926 in Firestone's study on Canada's Economic Development. The reason is that the implicit price indexes for this period are uniformly applied to the earlier mentioned Firestone GNP-estimates in constant 1935-39 dollars. The differences, which are limited, are due to the fact that the latter figures are special estimates for the above study. It might also be observed that the GNP-estimates as presented in Table 1 in this study also differ from those presented in a later study on Industry and Education by O.J. Firestone.¹⁶ The estimates in the present study are between 0.5 per cent and 17 per cent higher than those for selected years presented by Firestone. This is approximately the range the same author regards as an understatement of his own later estimates of GNP for selected years between 1867 and 1926.¹⁷ Thus, as a consequence, Firestone's most resently published estimates have been disregarded.

According to the Firestone's indexes, price inflation entered the economic scene at about the turn of this century and it is generally accepted that it reached its highest peak in 1920, considering the pre-World War II era. The indexes are given decennially by Firestone and missing index-data are estimated by the present author on the basis of

¹⁶O.J. Firestone, Industry and Education, (Ottawa: University of Ottawa Press, 1969), Appendix A, Table I, pp.261-263.

¹⁷Ibid., Appendix B, pp.275-278.

observations on economic fluctuations as reviewed in the literature.¹⁸ It is evident that the estimation methods used are lacking a certain degree of reliability and great caution must be observed in using the data. It is thought that these GNP-data are more significant for trends and development as opposite to absolute magnitude which makes the exercise justified and worthwhile for the purpose of this study.

Population. Decennial censuses for all Canada have been taken since the year 1871 and quinquennial censuses since 1956. This provides twelve years of population data of high quality for the purpose of this study, evenly distributed over the whole period. Since 1921, each census population constitutes the foundation for official population estimates for the intercensal years. The officially estimated changes in the population from year to year are mainly based on vital statistics and migration data. The accuracy of the published population estimates is regarded as fully sufficient for the analysis in the following chapters.

For the non-census years, prior to 1921, another series of estimates by the Dominion Bureau of Statistics was published in 1936.¹⁹ Up to 1900,

¹⁸See for example: J.J. Deutsch, "War Finance and the Canadian Economy, 1914-20," in the Canadian Journal of Economics and Political Science, vol.VI, No.4, (Nov. 1940) pp.525-542, Irving Brecher and S.S. Reisman, Canadian-American Economic Relations, Royal Commission on Canada's Economic Prospects, Part 1, (Ottawa: Queen's Printer, 1957), pp.18-26 and Andre Raynauld, op. cit., pp.75-84.

¹⁹DBS, The Canada Yearbook, 1936, (Ottawa: King's Printer, 1936), p.141.

these data were related to the beginning of April and since 1900 to June 1.²⁰ The difference constituted by this change is regarded as insignificant in comparison to the estimation errors that most likely exist. Accordingly, no adjustments are made.

2:3 Summary

The framework and purpose of this study is laid out in this chapter and the statement has been made that the study is extensive rather than intensive. Some arguments for this approach are presented with the essence that the present author judges basic research and extensiveness as more essential than intensive applied research in this particular field.

A table of basic data is presented, containing the following items for the longest possible period of time, starting in 1867:

- | | |
|---|---------------------------|
| 1. Defence Expenditures | 4. Gross National Product |
| 2. Veterans' Benefits | 5. Population |
| 3. Total Federal Budgetary Expenditures | |

All items, except population, are either directly or indirectly based on the Public and National Accounts of Canada. Population data are either taken from or estimated on the basis of decennial or quinquennial censuses.

In general terms it can be stated that data prior to 1926 are less, and in some instances considerably less reliable than data after 1926. This is particularly true for GNP-data which are, prior to 1926, estimates based on an insufficient amount of economic indicators. It is probably also true that various estimates made by the present author are less

²⁰O.J. Firestone, Canada's Economic Development, op. cit., pp.244-245.

reliable than those presented by scholars in the fields of statistics and economics. The consequences of this probable situation are taken by the means of accurate caution in the data-analysis in the following chapters.

CHAPTER III

SIGNIFICANCE OF DEFENCE EXPENDITURES, 1867-1935

3:1 Introduction

As previously mentioned, the historic period in this study is constituted by the years between 1866 and 1936. For analytical reasons it was judged convenient to have as long periods as possible without loss of any typical characteristics within each particular era. Evidently there were many alternatives to be considered before the final decision was made -- a decision that turned out to be a reasonable compromise. Having only two major periods allows for a more proper graphic presentation in the sense that trends and developments are better visualized the longer the time-span is. The general characteristics of the two periods are significantly different, although there are great differences within each major period, earmarked mainly by the two world wars. The selection of the end year 1935 of the historic period is somewhat artificial in order to allow the following period, for comparative reasons, to start with three years with representative pre-war level of military expenditures. For the sake of consistency it should be kept in mind that the years 1936-1938 bear most of the significant economic characteristics of the first period rather than the second.

In the analysis both periods are broken down in sub-periods of alternate lengths, each of which has a certain character and drawing various degrees of attention. The defence expenditures are analysed in both absolute and relative terms. They are related to the non-defence

budgetary expenditures and the Gross National Product. In the absolute sense they are analysed in terms of total outlays and per capita outlays. All figures are tabulated and major characteristics are visualized in diagrams.

3:2 From 1867 to the Great War

By the creation of the Canadian Federation in 1867 the federal government became gradually responsible for the nation's defence. Previously, Great Britain had been in charge of this within the Colonial framework. The British troops were gradually withdrawn and the last of the land-based forces left Canada in the early 1880's. This was a logical arrangement that the Canadian authorities were willing to undertake, emphasized by the fact that the Department of Militia and Defence was established in the year of Confederation. Land defence became very early an entirely Canadian matter whereas naval defence was largely in the hands of Great Britain up until the Second World War.¹

Prior to 1914, military defence as an item in the federal budgets was very insignificant in both absolute and relative terms, as compared to later years and especially the last three decades. From Tables I-III the following evident observations can be made.

1. Not until 1912 did the absolute amount spent on defence exceed ten million dollars and prior to 1905 it did not exceed five million dollars for any single year.

¹For a more detailed review of the development of the early Canadian military defence, see various extracts from the minutes of proceedings of the Colonial Conferences between 1887 and 1907 in, The Colonial and Imperial Conferences from 1887 to 1937, compiled and edited by Maurice Ollivier, (Ottawa: Queen's Printer, 1954), Vol.I, Colonial Conferences.

TABLE II

RELATIVE CHARACTERISTICS OF DEFENCE EXPENDITURES,
VETERANS' BENEFITS, AND TOTAL BUDGETARY EXPENDITURES
CANADA 1867-1935

Year	Defence Exp's as Per Cent of Non-Defence Exp's	Veterans' Benefits as Per Cent of Non- defence Ex- penditures	Defence Exp's as Per Cent of GNP	Total Budgetary Expenditures as Per Cent of GNP
1867	6.2	Nil	0.2	3.3
1868	6.6	"	N.A.	N.A.
1869	7.2	"	"	"
1870	5.0	"	0.2	4.2
1871	7.2	"	0.4	5.5
1872	3.5	"	0.3	10.0
1873	4.1	"	0.3	7.7
1874	3.5	"	0.2	6.3
1875	3.7	"	0.2	6.3
1876	1.9	"	0.1	6.3
1877	2.1	"	0.1	5.8
1878	2.8	"	0.2	5.8
1879	2.5	"	0.1	5.5
1880	2.5	"	0.1	5.0
1881	2.8	"	0.1	4.5
1882	2.0	"	0.1	5.7
1883	2.0	"	0.2	7.9
1884	6.3	"	0.4	6.0
1885	8.1	"	0.5	6.9
1886	4.2	"	0.2	5.1
1887	4.6	"	0.2	5.4
1888	3.5	"	0.2	5.0
1889	3.6	"	0.2	4.9
1890	3.7	"	0.2	4.7
1891	3.6	"	0.1	4.3
1892	4.0	"	0.2	4.2
1893	3.5	"	0.2	4.6
1894	4.3	"	0.2	4.6
1895	5.5	"	0.2	4.5
1896	6.8	"	0.3	4.0
1897	4.4	"	0.2	4.8
1898	5.6	"	0.3	4.7
1899	7.7	"	0.4	5.0

Continued...

TABLE II (Continued)

Year	Defence Exp's as Per Cent of Non-Defence Exp's	Veterans' Benefits as Per Cent of Non- defence Ex- penditures	Defence Exp's as Per Cent of GNP	Total Budgetary Expenditures as Per Cent of GNP
1900	6.1	Nil	0.3	5.3
1901	4.8	"	0.2	5.2
1902	4.6	"	0.2	4.6
1903	5.7	"	0.3	5.1
1904	5.8	"	0.3	5.5
1905	7.6	"	0.4	5.3
1906	7.3	"	0.3	3.9
1907	6.7	"	0.4	6.6
1908	5.2	"	0.4	7.3
1909	5.7	"	0.3	5.5
1910	8.2	0.1	0.4	5.6
1911	7.7	0.1	0.4	5.6
1912	8.7	0.1	0.4	5.6
1913	7.8	0.1	0.5	6.4
1914	41.6	0.4	2.6	8.8
1915	104.3	0.5	5.7	11.1
1916	168.9	1.5	9.2	14.7
1917	149.5	3.6	8.6	14.4
1918	170.7	11.8	9.8	15.5
1919	88.0	18.9	6.8	14.5
1920	6.1	15.3	0.5	9.5
1921	3.8	12.2	0.4	10.9
1922	3.3	11.2	0.3	9.5
1923	3.7	12.6	0.3	7.7
1924	3.9	13.3	0.3	7.5
1925	4.1	13.5	0.3	7.4
1926	4.3	13.4	0.3	7.0
1927	4.9	17.1	0.3	6.8
1928	5.2	16.9	0.3	6.5
1929	5.7	13.1	0.4	6.6
1930	5.6	13.6	0.4	7.7
1931	4.2	14.2	0.4	9.6
1932	2.6	10.8	0.4	14.0
1933	3.0	12.4	0.4	13.1
1934	3.0	11.8	0.4	12.0
1935	3.3	10.7	0.4	12.4

Source: Calculations from Table I.

TABLE III

PER CAPITA EXPENDITURES ON NATIONAL DEFENCE, VETERANS' BENEFITS AND
TOTAL FEDERAL BUDGET, AND GROSS NATIONAL PRODUCT PER CAPITA
CANADA: 1867-1935 Current Dollars

Year	Defence Expendi- tures per capita	Veterans' Benefits per capita	Total Budgetary Expenditures per capita	GNP per capita
1867	0.23	Nil	3.96	120
1868	0.26	"	4.13	N.A.
1869	0.34	"	5.02	"
1870	0.25	"	5.21	124
1871	0.46	"	6.83	125
1872	0.35	"	10.28	103
1873	0.34	"	8.63	111
1874	0.28	"	8.29	132
1875	0.28	"	7.87	125
1876	0.15	"	7.88	125
1877	0.15	"	7.26	126
1878	0.19	"	7.18	123
1879	0.19	"	7.84	141
1880	0.19	"	7.66	155
1881	0.21	"	7.72	170
1882	0.18	"	9.51	167
1883	0.25	"	12.75	162
1884	0.62	"	10.61	176
1885	0.99	"	13.27	193
1886	0.35	"	8.71	172
1887	0.41	"	9.32	183
1888	0.30	"	8.94	178
1889	0.30	"	8.44	171
1890	0.29	"	8.14	174
1891	0.29	"	8.32	194
1892	0.31	"	7.93	187
1893	0.28	"	8.29	180
1894	0.34	"	8.21	178
1895	0.44	"	8.36	186
1896	0.51	"	8.06	202
1897	0.35	"	8.40	174
1898	0.50	"	9.47	203
1899	0.69	"	9.59	193

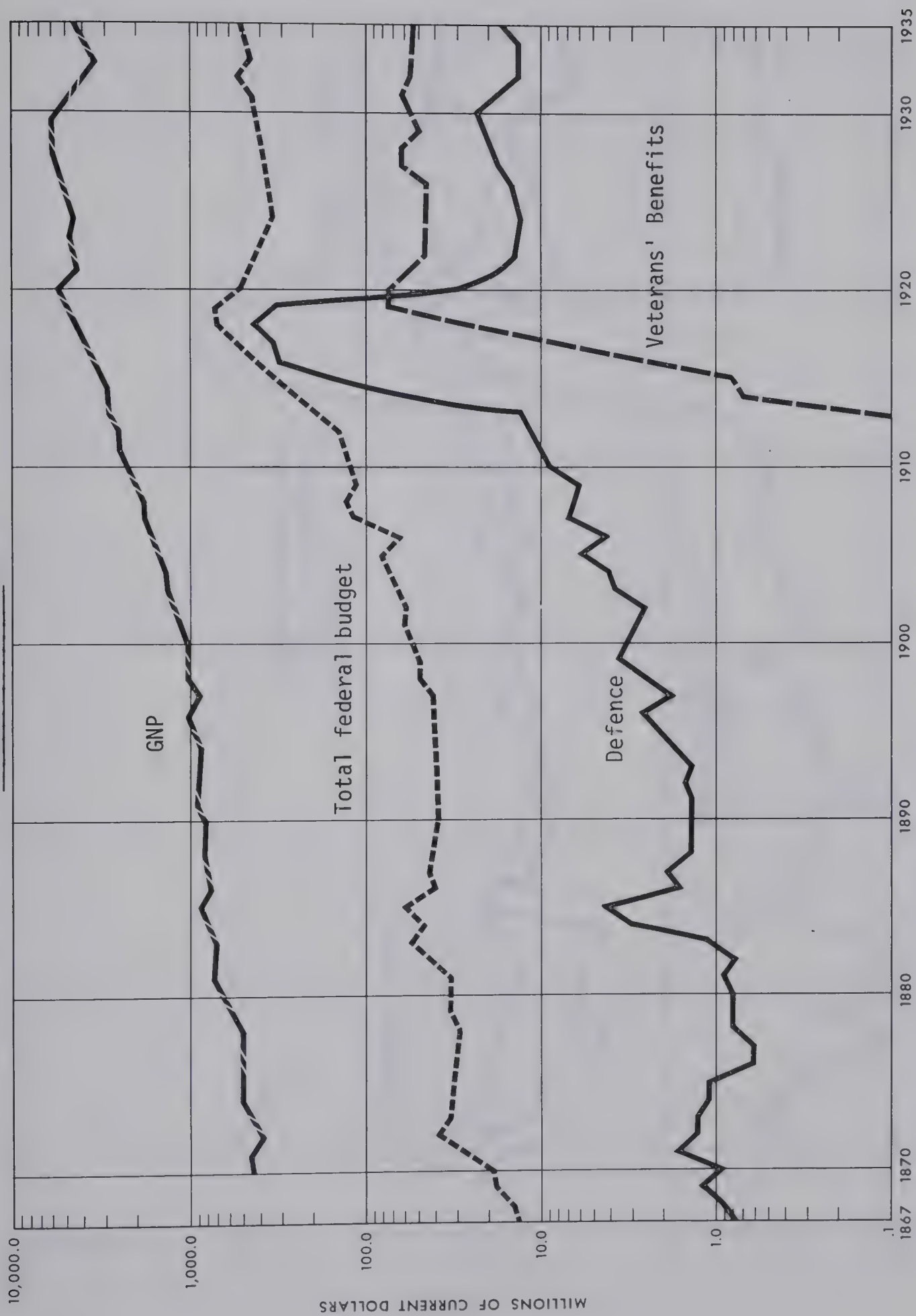
Continued...

TABLE III (Continued)

Year	Defence Expenditures per capita	Veterans' Benefits per capita	Total Budgetary Expenditures per capita	GNP per capita
1900	0.60	Nil	10.47	199
1901	0.52	"	11.43	219
1902	0.47	"	10.76	234
1903	0.65	"	12.23	238
1904	0.72	"	13.13	239
1905	0.95	"	13.50	254
1906	0.72	"	10.60	268
1907	1.08	"	17.20	261
1908	0.98	"	19.85	271
1909	0.90	"	16.75	303
1910	1.32	)	17.40	309
1911	1.35	) less	18.87	337
1912	1.54	) than	19.37	347
1913	1.77	) 0.10	24.23	377
1914	9.19	)	31.27	354
1915	21.61	0.10	42.34	382
1916	39.00	0.34	62.08	422
1917	42.66	1.00	71.15	495
1918	53.84	3.64	85.37	551
1919	41.70	8.81	89.05	614
1920	3.53	8.81	61.82	651
1921	1.99	6.38	54.20	497
1922	1.59	5.38	49.47	521
1923	1.49	5.01	41.27	535
1924	1.44	4.93	38.52	513
1925	1.52	4.96	38.26	517
1926	1.57	4.87	38.01	544
1927	1.83	6.42	39.41	577
1928	1.99	6.43	40.07	615
1929	2.17	5.00	40.41	612
1930	2.29	5.58	43.26	560
1931	1.72	5.89	43.24	452
1932	1.28	5.32	50.66	363
1933	1.24	5.18	43.09	328
1934	1.29	5.08	44.51	370
1935	1.59	5.08	49.11	397

Source: Calculations from Table I.

FIGURE 1: GROSS NATIONAL PRODUCT AND FEDERAL BUDGETARY EXPENDITURES¹
CANADA 1867-1935

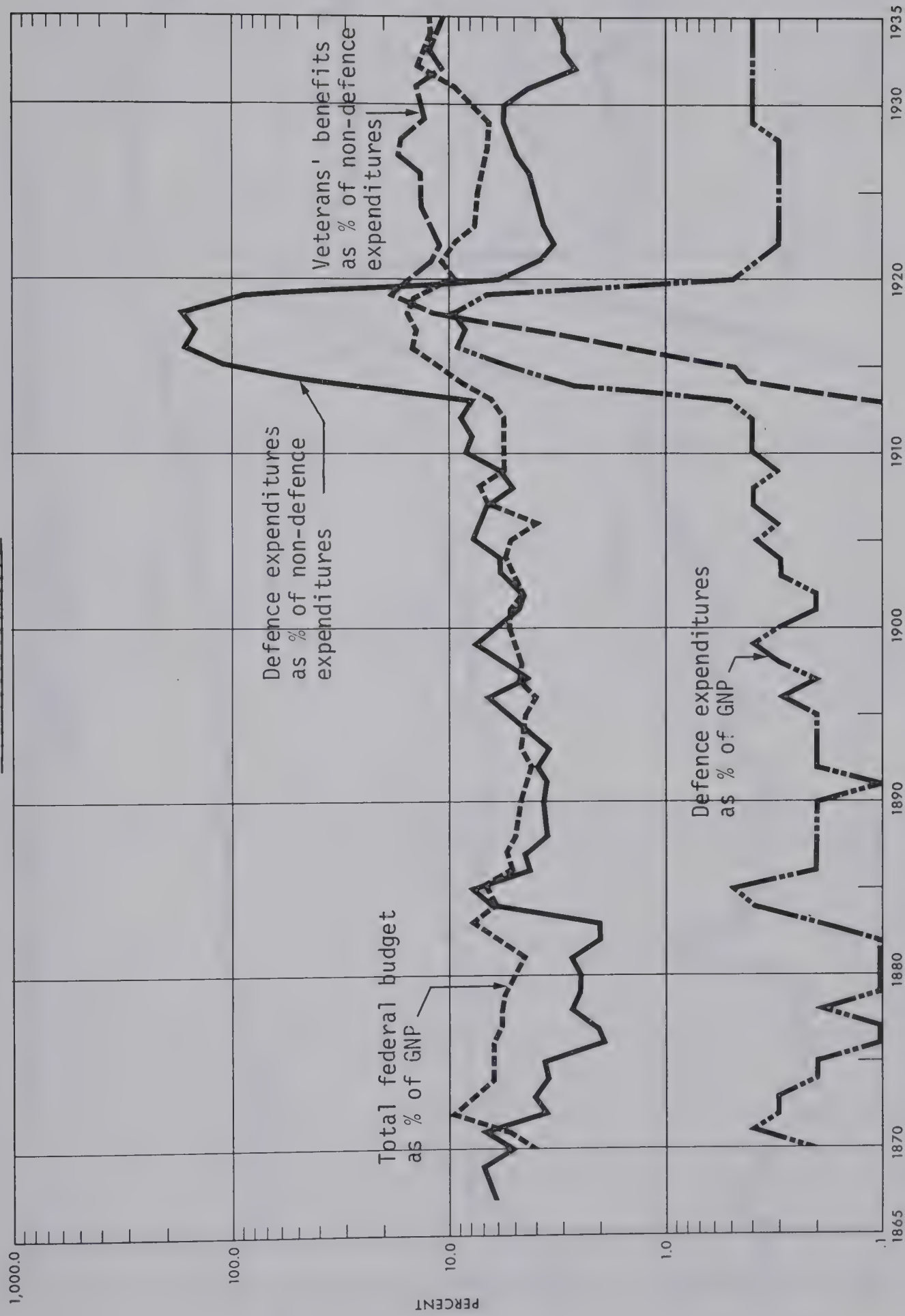


¹Based on data as presented in Table I

FIGURE 2

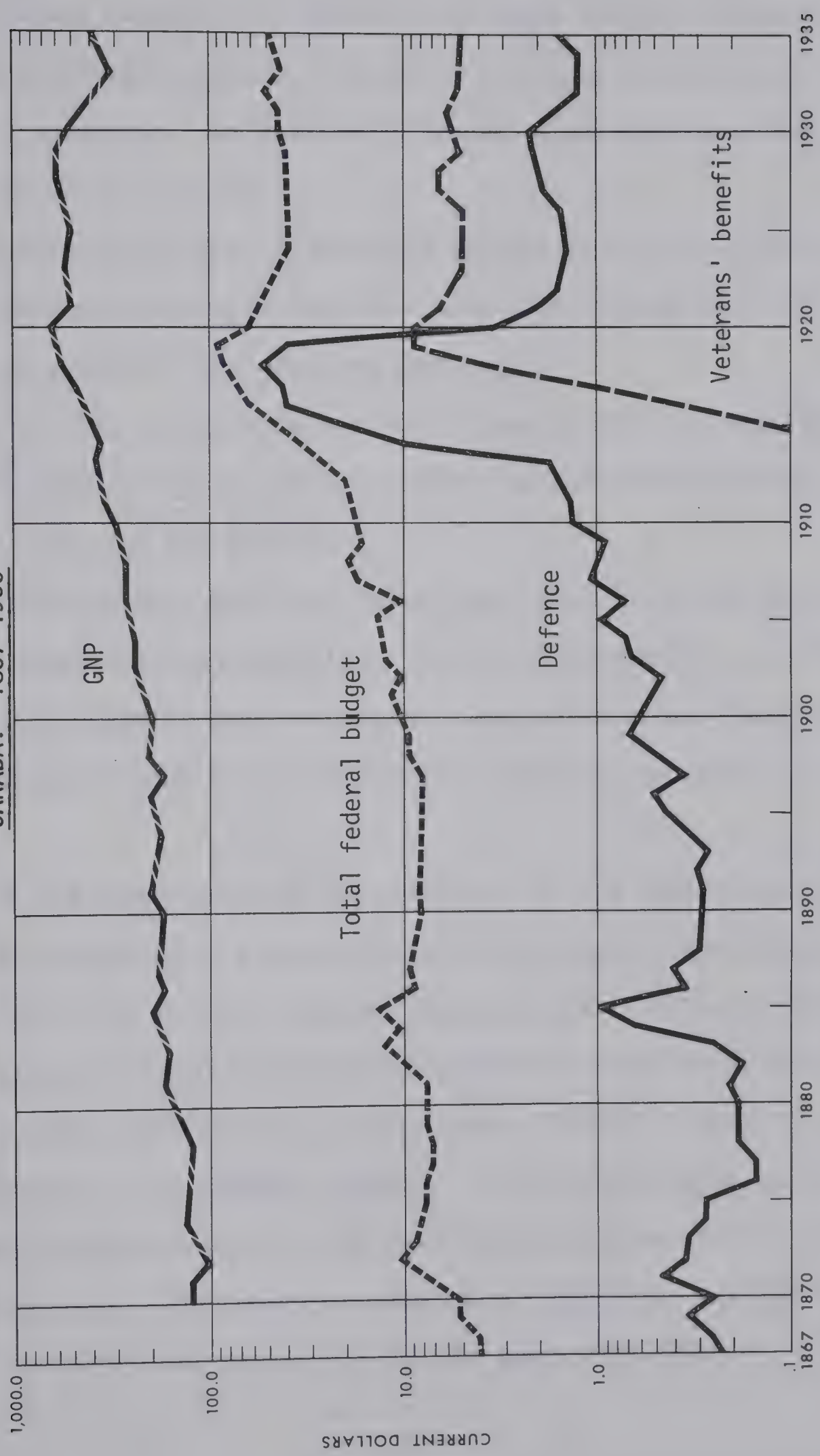
RELATIVE CHARACTERISTICS OF TOTAL FEDERAL BUDGET
DEFENCE EXPENDITURES, AND VETERANS' BENEFITS¹

CANADA: 1867-1935



¹ Based on data as presented in Table II

FIGURE 3 GROSS NATIONAL PRODUCT AND FEDERAL BUDGETARY EXPENDITURES PER CAPITA¹
CANADA: 1867-1935



¹Based on data as presented in Table III

2. The defence expenditures' share of the Gross National Product did not exceed one half of one per cent for any fiscal year of the period concerned. For most of the years it was even less than one quarter of one per cent.
3. For a majority of years the defence outlays in relation to the budgetary non-defence outlays were less than five per cent and without exception less than ten per cent.
4. Only for five years at the end of this period did the annual per capita expenditures on defence possibly exceed one dollar but still less than two dollars.

These observations hold to a large extent even if serious estimation errors are taken into consideration. There is a possibility that these unknown errors slightly invalidate some of the observations for single years, although they do not, by any means, affect the generality of the analysis.

Trends and developments of the variables for the historic period are clearly visualized in Figures 1-3. For the sub-period in concern, that is, 1867-1913, it can in general terms be said that the presented economic variables indicate an erratic economic progress up to about 1895 and a more significant and regular growth thereafter which is also well documented in the economic history. The following table shows the approximate relative growth for the whole period of some of the variables involved. The growth is calculated between the average for the years 1867-1871 and the average for the years 1909-1913.

TABLE IV

RELATIVE GROWTH OF GNP, TOTAL FEDERAL EXPENDITURES, DEFENCE
EXPENDITURES, AND POPULATION
CANADA: 1867-1913

	1867-1913	ANNUALLY ¹
	%	%
GNP	450	4.2
GNP PER CAPITA	175	2.5
TOTAL EXPENDITURES	680	5.0
TOTAL EXPENDITURES PER CAPITA	285	3.2
DEFENCE EXPENDITURES	810	5.4
DEFENCE EXPENDITURES PER CAPITA	345	3.7
POPULATION	102	1.7

As can be seen, much of the absolute growth is reduced when both GNP and the expenditures are calculated on a per capita basis. This is an obvious consequence of the continuous growth of the population. It can also be seen that the defence outlays grew faster than both GNP and total expenditures. However, any far-reaching conclusions should not be based on this fact considering the diminutive size of the defence expenditures at the beginning of the period and with the relative ease with which these expenditures could be increased, if necessary, without seriously hurting the total economy. The relative insignificance of military spending during this period can also be observed from the occasionally heavy year-to-year fluctuations caused by mainly internal and local rebellions by minority groups in the West. Two such rebellions took place and culminated in 1871 and 1885, respectively, under the

¹Estimated with graphic compound interest technique.

leadership of Louis Riel.² The increases in defence expenditures necessitated by the military actions against the rebels, were in relative terms considerable. The costs almost doubled from 1870 to 1871 but were still below two million dollars and relative to non-defence expenditures they increased only from 5.0 per cent to 7.2 per cent. The later rebellion, culminating in 1885, was more serious and is also clearly visible in Figure 1 in regard to military outlays. The defence expenditures rose from 0.8 million dollars in 1882 to a peak of 4.5 million dollars in 1885 and proportionate to non-defence costs this was an increase from 2.0 per cent to 8.1 per cent. Even the non-defence budgetary expenditures increased sharply between 1880 and 1885 after the government had committed itself to subsidize the trans-continental railway construction from Montreal to Vancouver. The governmental cash subsidy of 25 million dollars alone to the Canadian Pacific Railway Company in 1880 was approximately equivalent to the total military expenditures between 1867 and 1900, including extraordinary allotments to the Department of Militia and Defence totalling 4.9 million dollars in the years 1884 and 1885.³ Keeping this in mind together with the fact that the average per capita spending on military

²For a detailed review of these rebellions and the military operations see for example: R.E. Lamb, Thunder in the North, (New York: Pageant Press, Inc., 1957), 354 pp. or G.H. Needler, Louis Riel, (Toronto: Burns and Mac Eachern, 1957), 81 pp.

³Canada. Public Accounts, 1886, (Ottawa, 1887), p.XXXV and Kenneth McNaught, The Pelican History of Canada, Penguin Books, (Harmondsworth: Middlesex, England, Penguin Books, Ltd., 1969), p.170.

defence during the period 1867-1913 was less than one half of one per cent of the present "peace-time" level, substantiates the common opinion that defence expenditures were insignificant in both absolute and relative terms prior to World War I.

Several reasons for this situation can be found. The nation was still young and heavily committed to investments and capital formations within its own borders. International trade and diplomatic relations were not well developed except with U.S.A. and countries in the British Empire. With those political entities Canada lived in peace and security. England, as the self-evident leader in the Empire and for a long time the supreme power in the world, in case of a major conflict, was the natural provider of military protection for the colonies and the newly established autonomous nations. Internationally, Canada was a small nation, although with a great potential, and geographically far away from the European and Asian conflict areas. The incentives and needs for strong army and naval forces were not there and the existing forces were entirely designed for defence of Canada's borders and maintenance of internal security. Canada's reluctance to get involved in conflicts on foreign ground became obvious in 1899, when the federal government first after a heated debate and strong British pressure reached a decision of compromise to send troops to the Boer War on a voluntary basis. Over a period of three years approximately 8,000 Canadian troops were sent overseas and all major expenses were paid by the British government.⁴

⁴MacKirdy-Moir-Zoltvany, Changing Perspectives in Canadian History, Dent University Paperbacks. (Don Mills, Ontario: J.M. Dent & Sons Canada Limited, 1967), pp.256-257 and McGraw-Hill, Directory and Almanac of Canada, 1968, (Toronto: McGraw-Hill Company of Canada Ltd., 1968), Section on "Canadian Military History," p.11.

As can be seen from Table I and Figure 1 a fairly rapid increase in defence expenditures took place from about 1897 to the end of this first period. The increase was approximately five-fold and has to be looked upon in the light of several factors. Firstly, a booming economy -- rapid growth of GNP. Secondly, a strong federal government headed by Wilfrid Laurier -- rapid growth of federal budgetary expenditures. Thirdly, substantially expanding international trade -- the "wheat-boom". Fourthly, increased nationalism and independence. These four factors are not mutually exclusive and not necessarily ranked in order of importance, but were certainly essential for the development of the Canadian armed forces. It is not very likely that the development of the defence expenditures during the fifteen last years, or any shorter period thereof, prior to the First World War reflect any kind of preparation for what would follow in terms of Canadian military and economic efforts. Furthermore, the trend was uniform up to 1913, and Canada, as well as most other nations, were essentially unprepared for a major military and economic engagement at the time of the first world conflict.

3:3 The Great War, 1914-1919

For obvious reasons it is necessary to analyze this period separately. This is a period during which Canada became one of several actors on the world scene. The price was high both in terms of human losses and economic efforts. During the four years Canada was engaged in the war more than 60,000 Canadians were killed and almost 200,000 were wounded.⁵ The human

⁵McGraw-Hill Directory of Canada, op. cit., p.12.

tragedies in the war is not a major consideration in this study although some economic implications of those casualties will enter the discussion below.

As is evident from the tables and figures in Chapter II and this chapter, the outbreak of the war brought about a dramatic change in the economy. Military expenditures skyrocketed and exceeded the total non-defence budgetary expenditures for four consecutive years, 1915-1919. The defence budget of 1918 was more than thirty times the size of the defence budget of 1913, that is, approximately a rise from 14 million dollars to 440 million dollars. During the six years between 1914 and 1919 the direct military outlays on the war were in the neighbourhood of 1.8 billion dollars. This sum exceeded the non-military outlays by approximately 0.4 billion during the same period. These observations bring the discussion back to the problem mentioned earlier with the distinction between war and non-war expenditures. For the years 1940-1944 it is explicitly stated in the Public Accounts of Canada that the distinction is arbitrary, whereas nothing is said about these difficulties in the accounts for the years of the First World War. It is assumed, however, that these problems existed even during those war years but to a minor, and possibly negligible, extent as compared to the 1939-45 war.

One writer stated already in the first year of the Second World War that "While Canada's effort in the war of 1914-18 was very substantial, the burdens on the economy were relatively light compared with the demands of the struggle she is engaged in today".⁶ The war expenditures at the

⁶J.J. Deutsch, "War Finance and the Canadian Economy, 1914-20" in The Canadian Journal of Economics and Political Science, vol.VI, No.4 (November, 1940), p.537.

time this was written were still fairly moderate compared with those of the four following years, which ought to imply that the economic efforts of the First World War were totally overshadowed by those of the Second World War. This question will be returned to in the following chapters.

Financing. From approximately 1897 to 1913 Canada had experienced a prosperous period with rapid economic growth. Heavy capital investment had been made with a large share allocated to the production of capital goods employed directly on construction projects and in the forests, mines and factories supplying material and equipment for new capital facilities.⁷ This was made possible to a large extent by external borrowing from overseas capital markets. Access to investment money was easy and export prices were high. The interest on the borrowed money accumulated, and it became necessary to shift the factors of production, that is, capital and labour, from employment in investment goods to employment in the export industries. This difficult task was realized to its full extent at about the same time as the interest rates in the London money market rose steeply in 1913 and export prices began to fall. This brought about a general recession in the economy and the unemployment rates increased rapidly.⁸

With this comprehensive review of the development of the pre-war economy in mind it is ironical to observe that the war enabled the Canadian economy to recover rather quickly. The necessary basic invest-

⁷Ibid., p.525.

⁸Ibid., pp.525-526.

ments were made in the capital goods industry and there was a great potential in production capacity that had never been fully utilized. The conversion from producing consumers' goods to production of war materials did not appear to be technically difficult. Raw materials and machinery were readily available as well as unemployed labour. In the light of the urgency of a rapid conversion in production characteristics and in addition to the technological potential it was, however, felt that the transition was slower than desired. There were two major factors underlying this. The first, and probably the most important one, was a sudden scarcity of financial means. The foreign money markets had considerably diminished, although the British Government promised early in the war to lend Canada necessary funds to cover the war expenditures overseas, which of course did not directly give the injection the Canadian production machinery so urgently needed. The second problem was the scarcity of trained and skilled labour and further problems with labour market transformations and immobility.⁹

The financial problems were solved by various means during the course of the war. The revenue position of the government at the beginning of the conflict was serious. Customs duties, the major income source, had fallen sharply with the decreasing international trade, and during the fiscal year 1914-1915 a large deficit threatened even before anything was provided for the war. There were in principle three methods available to the government by which it could obtain the funds necessary to cover

⁹Ibid., pp.525-528.

the extraordinary costs. These were taxation, the issue of government notes, and borrowing. Although taxation was considered it was thought, as an untried method, to be too revolutionary to impose. Since the issue of Dominion notes was outruled as too limited an income source there remained only one method of raising funds, namely, borrowing. The first war year's capital outlays were then covered mainly by borrowing both in external and internal markets.¹⁰

The total expenditures rose rapidly and new means of financing had to be found. Already in 1915 it was quite clear that borrowing alone was insufficient. Taxes were levied for the first time and cautiously placed on specific items, especially within the field of communication, and on the premium of life insurance companies and on the gross income of loan and trust companies. During the rest of 1915-1916 war costs were paid through a domestic loan that appeared to yield much more than was anticipated. This opened the eyes of the Government for the potential of the domestic money market. This improvement was essentially a consequence of three major factors, the very large wheat crop of 1915, inflationary export price increases, and the placing of British and Allied war orders in Canada. Prosperity was returning and Canada was able from 1916 to the end of the war to carry the economic burden entirely on its own. This was possible partly through the implementation of corporation taxes in 1916 and personal income taxes in 1917. The foundation of the modern tax system was laid in Canada during these years of conflict and hardship.¹¹

¹⁰Ibid., p.528.

¹¹For a comprehensive and excellent review of Canadian war financing 1914-1918 see J.J. Deutsch, op. cit.

The table below shows implicitly that all war and demobilization expenditures were financed by various forms of borrowing. For four of the six years there was even a deficit in the "non-war" section of the budget that also had to be financed by borrowing. The figures presented in Table V do not necessarily correspond with earlier presented figures in this study, since primary information sources are different and the figures were compiled during separate periods in time.

TABLE V

REVENUE AND EXPENDITURES OF THE DOMINION GOVERNMENT, 1915-1920
(MILLIONS OF DOLLARS)

	Fiscal years ending March 31					
	1915	1916	1917	1918	1919	1920
Ordinary expenditures	136	130	149	178	233	304
Capital expenditures and investments	87	45	73	128	47	232
Total excluding war	223	175	222	306	280	536
Less-current revenues	133	172	233	261	313	350
Deficit (-) or surplus (+)	-90	-3	+11	-45	+33	-186
Expenditures on war and demobilization:						
Overseas	9	38	125	191	158	75
In Canada	52	128	182	153	289	272
Total	61	166	307	344	447	347
Total deficit, (financed by borrowing)	151	169	296	389	414	533

Source: J.J. Deutsch, "War Finance and the Canadian Economy, 1914-20" in The Canadian Journal of Economics and Political Science, Vol.VI, No.4 (November, 1940), Appendix, Table II, p.540.

It is interesting to note that, in the fiscal year 1919-1920, the government spent almost 350 million dollars on the "defence" account, in spite of the fact that the war had ended almost half a year earlier. From a formal point of view it is proper to include these expenditures in this study since the money was allotted to and channeled through the Department of Defence. The factors inducing those expenditures, however, were definitely consequences of the previous hostilities and probably only a very minor part of the outlays was directly connected with military defence in its narrow sense. In total it was estimated that roughly 400 million dollars were spent on demobilization and re-conversion of the economy.¹²

Veterans' Benefits. Another expenditure that expanded very rapidly between 1916 and 1919 as a consequence of the war were the veterans' benefits. These include payments for veterans' pensions and assistance, and hospitalization. The pre-war level of these payments was naturally very low, under 1 million dollars annually. At the end of the war the annual payments totalled about 75 million dollars. Already in the fiscal year 1920-1921 the outlays for veterans' benefits were more than twice as high as the total defence expenditures.

Summary. As can be seen from tables and charts in the two foregoing chapters, the years 1914-1919 constituted a very distinct and significant period in Canadian economic history in general and in defence economics in particular. Canada entered the war as a minor military and economic power, heavily dependent on the outside world, and ended up as one of the major

¹²Ibid., p.532.

powers able to make substantial capital advances to less fortunate nations. As said before, the price was high in human lives and in terms of the effect on the national debt. The total indirect and direct debt increased from 550 million dollars in 1913 to 2,978.4 million dollars in 1919.¹³ A very large proportion of this was held by Canadians and thus it is not necessarily an indicator of the strength of the over-all economy.

3:4 Period 1920-1935

The last fifteen years of this first major period are, from the points of view of defence economics and defence strategy, very similar to the pre-war period. The world had great hopes after the hostilities had ceased and it was expected that a war of this magnitude could not repeat itself. A lesson was learned and the nations could return to peaceful rebuilding and further progress. As well as the pre-war economy, this short era was characterized by significant swings between economic peaks and troughs, with major peaks of prosperity occurring in 1920 and 1929 and severe troughs in 1921 and 1933.¹⁴ These characteristics were international, hence affecting the Canadian economy, at times very seriously, with its then relatively diversified production and international trade. The data series on defence expenditures in Table I and the graphical presentation in Figure 1 for this period reflects the fluctuations in the economy to some extent which could indicate that the amount spent on military defence was a function of the general economic situation rather than an independent

¹³Urquhart-Buckley, op. cit., Series G45-61, p.204.

¹⁴Andre Raynauld, op. cit., p.77.

function of an absolute and feasible level of security. The opinion is also supported by the data series in Table II, (Figure 2) that show very little fluctuation in the relative measurements. This is particularly apparent for the defence outlays in relation to the Gross National Product, a rate that varies between 0.3 and 0.4 per cent for the whole period except for 1920 when it was 0.5 per cent. It is, however, notable that the defence outlays, relative to non-defence expenditures, went down considerably during the severe depression in the early 1930's. This was due to a combined effect of deliberate cut backs on defence and increased governmental economic activities in various non-military sectors.

As noted earlier, the expenditures for veterans' benefits exceeded the total defence outlays in the fiscal year 1920-1921 and continued to do so for the remainder of this first major period. In general terms the fluctuations in these outlays followed the consumer price index with one or two years' lag, which would be consistent with the adjustments of the benefits from time to time.¹⁵

It has been clearly stated and sufficiently proved that Canadian military defence expenditure were insignificant during the pre-World War I era. The same conclusion must be stated in regard to the period between the two world wars. Although the absolute costs were higher the relative costs remained approximately the same, mainly due to inflation during the war and immediately after. The end of this first major period marks a turning point in the Canadian history of defence economics. With the exception of the First World War relatively little attention was

¹⁵For a series of Consumer's Price Index Numbers see: Urquhart-Buckley, op. cit., series J 128-131, p.303.

paid earlier, and for supposedly good reasons, to the question of military protection against an external aggressor invading and destroying Canadian territory. From the Second World War on, advanced military technology has completely changed the defence strategy with accompanying dramatic increases in expenditures. Somewhat arbitrarily this period can be said to start immediately before World War II.

3:5 Summary

One major characteristic in summing up the features of the defence expenditures for the period 1867-1935 must initially be emphasized, and that is their remarkable insignificance as compared to what the Canadian nation has experienced from the Second World War and onwards. An evident exception from this generalization is the First World War. Various forms of relative measurements of the level of defence expenditures suggest that also the absolute level has been low, although an assessment in absolute terms can not avoid subjectivity. With the significant exception of the 1914-1919 period, nothing indicates that defence expenditures have ever tested severely the strength of the Canadian economy during this first major period. Some of the reasons for this low level of military protection for a majority of years have been presented. These factors have changed over time according to the internal and external circumstances at any time and the experiences drawn from those. In connection with this the financial commitments and the over-all economic situation have been decisive factors as to the level of defence spending. In general terms there was in Canada, prior to 1895, a reliance upon Great Britain's military forces in combination with a relatively weak

economy with non-military priorities. The dependency upon Great Britain remained until the midst of World War I, but Canada became gradually more self-sufficient and confident. The Great War proved that Canada was a fully mature nation which was able to manage extensive war expenditures from almost entirely internal sources. Another factor contributing to low defence expenditures is the peaceful relationship, partly due to increasing dependency, with the only land neighbour - U.S.A. This factor can be combined with Canada's physical distance to major conflict areas in Europe, Asia and Africa during the period in concern.

Ironically enough it can be argued that the First World War contributed to Canada's economic progress, with a dramatic increase in production and external trade. As well as the rest of the world, however, Canada suffered badly from the inter-war depression and the rate of growth over the whole inter-war period was very slow, if any at all. The next period examined in this study, 1936-1970, will take off with another major war, that starts a new era with much economic expansion and accompanying defence expenditures.

CHAPTER IV

THE IMMEDIATE PRE-WAR PERIOD, THE WAR ECONOMY, AND THE LEVEL OF DEFENCE EXPENDITURES IN THE POST-WAR ECONOMY

4:1 Introduction

Defence spending during the 1930's was affected greatly by the severely depressed economy in the earlier half of that decade. The Department of Defence became one of the primary targets in budget cuts that had to be exercised for some years. The dissatisfaction was great in military quarters for various reasons. Some reasons were personal, like insecurity and diminishing opportunities of advancement, as well as working with obsolete material or no material at all. Other reasons were more general in character. There was concern over the rapid deterioration of the Canadian military defence ability in times when some European countries, as for example Germany and Italy, started to rearm, to a noticeable extent. This was the situation already in the beginning of the serious depression and the condition of the Canadian armed forces gave rise to much anxiety among concerned groups.

It is doubtful whether the public at that time was aware of the absolute low level of the Canadian defence capability or whether the public at large was even concerned about it in its struggle for daily survival. The government was constantly looking for ways and means to cut down the expenditures on departments that were thought, by their very nature, of not being able to relieve the economic depression. The government was aware of and informed about the rapidly deteriorating military machinery and sacrificed it. One writer states, somewhat

ironically, the following:

The increased tempo of military activity abroad had little effect upon the military affairs of the Dominion. The Prime Minister (R.B. Bennett) remained indifferent to the dilapidated condition of the country's defence forces, and took no interest in the activities of the Department of National Defence with the exception of its unemployment relief camps and the construction of new barracks in and about his home town of Calgary.¹

Regardless of whether this statement is true or not, it very likely reflected the general attitude towards military defence that prevailed during the depression. The upkeep and development of defence forces were given very low priority because of the economic conditions and isolationist tendencies, with the latter supposedly in parts derived from the former.

The change of government in 1935 from Conservative under R.B. Bennett to Liberal under W.L. Mackenzie King coincided with improved economic conditions and steadily increasing rearmament in some European nations. These two factors spoke for an increasing military budget that also immediately followed, but great caution was exercised in raising the allotments due to uncertainties in executing external policy. These uncertainties were apparently caused by increasing isolationism and belief in neutrality. The Prime Minister did little to disabuse the public mind in this respect, even though he himself probably never doubted what decisions that had to be made in the event of war.² King's official

¹James Eayrs, In Defence of Canada, From the Great War to the Great Depression, (Toronto: University of Toronto Press, 1964), pp.316-17.

²Kenneth McNaught, "The 1930's", in The Canadians 1867-1967, edited by J.M.S. Careless and R. Craig Brown. (Toronto: McMillan of Canada, 1968), Part One, pp.266-272.

policy, which he advocated very strongly, was a policy of "no commitments". This came to its clearest manifestation as late as in March 1939 in the following quotation which is often referred to:

The idea that every twenty years this country should automatically and as a matter of course take part in a war overseas for democracy or self-determination of other small nations, that a country which has all it can do to run itself should feel called upon to save, periodically, a continent that cannot run itself, and to these ends risk the lives of its people, risk bankruptcy and political disunion, seems to many a nightmare and sheer madness.³

When Great Britain declared war on Germany on September 3, 1939, Canada was suddenly caught in the dilemma between remaining loyal to the Commonwealth or following her intention to declare neutrality. At first glance it seems remarkable that it did not take more than one week after the British war declaration for the Canadian government to obtain almost unopposed authorization in Parliament to declare war on Germany. Up until at least spring of 1939 the voices for neutrality had been loud, the economy was regarded as too weak to stand a war, French-Canada still feared mass conscriptions as a result of Canadian obligations to the empire.⁴ These seemed to be some of the major factors during the latter half of the 1930's, pointing in a direction of non-participation in a world war. Possibly on the basis of experiences from the previous world conflict, it was convenient to recall the more apparent the crisis

³Canada, House of Commons, Debates, March 30, 1939, pp.2418-9 cited in J.L. Granatstein (ed.), Canadian Foreign Policy Since 1945: Middle Power or Satellite?, Issues in Canadian History, (Toronto: The Copp Clark Publishing Company, 1969), p.10.

⁴Kenneth McNaught, The 1930's, op. cit., pp.272-74.

became, a war appeared to "solve" problems of above mentioned nature, and "the unresolved questions of the thirties were merely swept under the table".⁵ This was a considerable change in attitude that brought Canada to the Second World War.

4:2 World War II, 1939-1945

Development of the Canadian participation. The Canadian war declaration was made official September 10, 1939. The public was at the outset clearly given the impression that the Canadian participation would be limited and the contribution would be mainly economic. The government repeatedly stated that no conscription for overseas services was to be undertaken and by this the nation was brought to unity even though it was somewhat fictitious.⁶ In the beginning there were no problems in mobilizing a sufficient number of men to the armed forces. The army enlisted an overwhelming majority of the volunteers and much smaller numbers were enlisted by the navy and the air force.⁷ One army division was soon sent to England but remained outside direct war-activity until December 1941.⁸ The defence expenditures for the fiscal year 1939/40 were close to 132 million dollars, an increase of approximately 100 million dollars from the previous year. This extra amount was obtained by the government in the short special session in early September

⁵Ibid., p.274.

⁶Kenneth McNaught, The Pelican History of Canada, op. cit., pp.264-65.

⁷Colonel C.P. Stacey, "Through the Second World War", in Careless-Brown (eds.), op. cit., pp.279-80.

⁸Ibid., p.289.

1939 as a war appropriation.⁹ From the fiscal year 1940/41 up to and including the fiscal year 1945/46 the defence budget was formally labeled "war expenditures" and defined as "charges to the War Appropriation Acts". The analytical consequences of this have previously been reviewed in Chapter II.

The government's policy of mainly economic contributions rather than contributions in terms of military manpower was based on the politically very fragile bi-cultural question of conscription and the promising prospects of economic recovery. The latter was in turn based on the presumption that war orders would be placed in Canada by Great Britain in the first place. In certain instances the pre-World War II situation was similar to the pre-World War I situation in that the economy was slack with a considerable degree of unemployment and idle industrial resources. The start was slow and hesitant since the government clung to its policy of limited liability. Political pressure started to build up and the government took the opportunity to test the public's opinion of the early war measures and approaches by dissolving the parliament in January, 1940 and called for a new general election. The election was a great victory for King and his government.

Two months later, in June, 1940, the Canadian policy of limited war effort came to a sudden end with the collapse of France and the successive German victories in western Europe. The plans for major industrial expansion were rapidly applied and as a consequence Canada became in a short time a major supplier of war material for England.¹⁰ The increase

⁹Kenneth McNaught, The Pelican History of Canada, op. cit., p.265.

¹⁰Ibid., pp.267-68.

in industrial output is partly reflected in the figures for war expenditures which rose from 752 million dollars in 1939/40 to a peak of 4,589 million dollars in 1943/44. The overall growth of the economy is clearly reflected by the GNP which increased from about 5.6 billion dollars in 1939 to about 11.1 billion dollars in 1943. This constitutes close to an 18 per cent average annual growth of GNP during this period. Although Canada soon lost her supreme position as a major arsenal and supply base for Great Britain shortly after the United States entered the war, industrial production continued to expand and diversify to the end of the war. At the peak of the Canadian production of war equipment and munitions in 1943 there were about 1.1 million persons directly or indirectly employed in war work as compared to slightly less than 1.1 million who served in the armed forces.¹¹

The rapid increase in the war expenditures was to a large extent due to an almost complete reconditioning of the armed forces. At the very beginning of the war, emphasis was traditionally placed on the army and less consideration given to the naval and air forces. It soon became evident, however, that the war was to be fought both on land, sea, and in the air, and more funds were gradually allotted, especially to the air force. The following table shows the approximate distribution of funds to the three forces during the war years. It is significant how the air force, towards the end of the war, was given greater emphasis, with an increasing share of the total budget for the three forces, whereas the naval force only maintained its relative importance.

¹¹Colonel C.P. Stacey, op. cit., pp.283-84.

TABLE VI

ALLOTMENTS TO THE ARMY, NAVY AND AIR FORCE
CANADA, FISCAL YEARS 1939/40 - 1945/46

Year	Army (Millions of \$ Current)	Navy	Air Force (Per Cent)	Army	Navy	Air Force (Per Cent)
1939/40	73	13	33	61	11	28
1940/41	380	88	55	73	17	10
1941/42	511	129	371	50	13	37
1942/43	1,038	210	617	56	11	33
1943/44	1,329	370	931	51	14	35
1944/45	1,262	417	1,260	43	14	43
1945/46	950	242	524	55	14	31

Sources: Canada, Public Accounts, Annually, 1940-46.

The large expenditures for the air force were partly due to the early implementation of the British Commonwealth Air Training Plan that was originally thought by Mackenzie King and his government to be Canada's major contribution to the war within the concept of limited liabilities.¹² It was a large contribution, signified by the fact that the plan had produced over 131,000 air-crew personnel by the end of the war.¹³ The financing, however, was shared between the participating Commonwealth countries, with Canada as the major contributor.

As mentioned earlier, the concept of limited commitment was abandoned immediately after the French collapse, except for the very sensitive question of conscription for overseas service. Recruitments to the armed forces were, during the two first war years, handled on a voluntary basis.

¹²James Eayers, In Defence of Canada, Appeasement and Rearmaments, (Toronto: University of Toronto Press, 1965), pp.105 and 111.

¹³Colonel P.C. Stacey, op. cit., p.282.

Mostly among English-speaking Canadians it was felt that this basis would not be sufficient in the light of possible future war commitments, and demands were put forward for authorization of unlimited conscription. The demands were strongly influenced by the Japanese attack on Pearl Harbor in December, 1941. The political pressure led to a decision in January, 1942 to leave this question to the electorate in a plebiscite that was held in April, 1942. As many expected, a large majority of the total number of voters supported the idea of abolishing the conscription restrictions, whereas in Quebec the outcome was the reverse. Not until 1944, after the heavy infantry casualties in Normandy, did the results of the 1942 "Survey of Public opinion" lead to compulsory call-ups for overseas service. Trained military personnel was available since conscription for home-defence service had been at work for some time. After serious difficulties with desertions and mutinies in several army camps in Canada, 13,000 conscripts were finally sent overseas to the European battlefields.¹⁴ At that time the Canadian armed forces had reached their fullest strength with the army, navy and air force heavily committed on many fronts.

The very large expansion of the military machinery can be expressed in terms of manpower. From a very small and badly equipped standing defence force of some few thousands at the outbreak of the war, the army grew to become by far the largest of the three forces and at the end of the war approximately 730,000 Canadians had served in it. The air force was almost non-existent at the outset, and ended up by having had

¹⁴Ibid., pp.293-97.

250,000 men and women serving it. The navy started the war with less than ten small war ships and a number of service-men that could be counted in hundreds and expanded to a strength of about 100,000 men and women.¹⁵ At the end of the war, the Canadian military strength was very likely the fourth largest in the world next after the U.S.A., Soviet Union, and Great Britain. The price that was paid in Canadian lives was nearly 42,000 dead or missing, with approximately 23,000 for the army, 17,000 for the air force, and 2,000 for the navy.¹⁶

War expenditures and the Canadian economy. Referring to Table I in Chapter II and the following Tables VII-IX it is very evident that Canada's economy, during the war period 1939-45, went through a drastic transition that laid the foundation for a new era in the country's economic history. As mentioned earlier, the GNP almost doubled between 1939 and 1943, when available resources were utilized close to optimum. When measured in constant 1961 dollars (Table IX) the growth between these two years was nearly 61 per cent, which indicates an annual average growth rate of about 12 per cent. This rate of economic progress, strictly in GNP-terms, has in all likelihood never been experienced before and certainly not afterwards. The magnitude of these impressive figures were more significant in the accounts than in the immediate reality, even though the rate of increase of living standard during the war period was very significant and considerably higher than in the inter-war period. The increase in the standard of living was mainly due to the full employment

¹⁵Ibid., pp.285-87.

¹⁶Ibid., pp.287 and 291, and Kenneth McNaught, The Pelican History of Canada, op. cit., p.269.

TABLE VII

RELATIVE CHARACTERISTICS OF DEFENCE EXPENDITURES,
VETERANS' BENEFITS, AND TOTAL BUDGETARY EXPENDITURES
CANADA 1936-1969

Year	Defence Exp's as Per Cent of Non-Defence Exp's	Veterans' Benefits as Per Cent of Non- defence Ex- penditures	Defence Exp's as Per Cent of GNP	Total Budgetary Expenditures as Per Cent of GNP
1936	4.2	11.1	0.5	11.5
1937	6.5	11.0	0.6	10.2
1938	6.6	10.7	0.6	10.5
1939	24.0	10.6	2.3	12.1
1940	151.3	11.8	11.2	18.6
1941	246.0	10.8	16.2	22.8
1942	566.8	10.2	36.3	42.7
1943	625.5	9.7	41.5	48.2
1944	532.6	13.8	37.3	44.3
1945	353.2	35.4	33.7	43.3
1946	17.3	26.9	3.3	22.2
1947	9.8	16.8	1.5	16.7
1948	14.1	14.5	1.8	14.4
1949	18.7	11.9	2.4	15.0
1950	36.9	10.2	4.4	16.2
1951	63.3	9.5	6.9	17.7
1952	83.4	10.2	8.2	18.0
1953	74.5	9.6	7.3	17.2
1954	65.2	9.3	6.7	16.9
1955	66.4	9.3	6.3	15.9
1956	58.2	8.2	5.7	15.5
1957	49.6	8.2	5.1	15.5
1958	36.8	7.4	4.2	15.7
1959	36.9	6.9	4.2	15.7
1960	34.9	6.6	4.1	15.8
1961	34.0	6.8	4.2	16.7
1962	32.3	6.8	3.8	15.5
1963	33.8	6.5	3.8	15.1
1964	28.2	6.3	3.2	14.5
1965	26.0	6.0	2.9	14.1
1966	23.9	5.5	2.8	14.3
1967	23.8	5.1	2.9	15.0
1968	19.9	4.8	2.5	15.1
1969	19.2	4.3	2.4	14.9

All data derived from Table I

TABLE VIII

PER CAPITA EXPENDITURES ON NATIONAL DEFENCE, VETERANS' BENEFITS AND
TOTAL FEDERAL BUDGET, AND GROSS NATIONAL PRODUCT PER CAPITA
CANADA: 1936-1969

Year	Defence Expendi- tures per capita	Veterans' Benefits per capita	Total Budgetary Expenditures per capita	GNP per capita
1936	1.95	5.20	48.60	423
1937	2.95	5.00	48.40	475
1938	3.05	5.00	49.60	473
1939	11.70	5.15	60.40	499
1940	66.10	5.15	109.80	590
1941	116.50	5.15	163.80	720
1942	320.00	5.75	376.40	881
1943	389.00	6.05	451.20	937
1944	369.90	9.55	439.10	992
1945	331.60	33.30	425.50	983
1946	31.50	49.20	214.30	967
1947	15.60	26.80	174.90	1,049
1948	21.00	21.60	169.70	1,180
1949	28.60	18.30	182.10	1,212
1950	57.10	15.80	211.60	1,309
1951	103.30	15.40	266.50	1,503
1952	136.40	16.70	300.00	1,663
1953	125.10	16.10	293.10	1,706
1954	110.40	15.70	279.70	1,651
1955	112.70	15.80	282.40	1,758
1956	110.90	15.60	301.50	1,951
1957	101.60	16.70	306.30	1,981
1958	84.40	16.90	314.10	1,996
1959	88.00	16.50	326.20	2,074
1960	86.20	16.40	333.40	2,114
1961	90.60	18.30	357.50	2,143
1962	86.30	18.10	353.60	2,279
1963	91.60	17.60	363.00	2,402
1964	82.20	18.30	374.20	2,581
1965	81.20	18.80	393.70	2,795
1966	84.70	19.50	438.70	3,069
1967	92.60	19.60	481.50	3,215
1968	86.30	20.60	519.10	3,445
1969	89.20	20.00	553.20	3,712

All data derived from Table I

TABLE IX

PRINCIPAL STATISTICS ON GROSS NATIONAL PRODUCT, DEFENCE EXPENDITURES,
VETERANS' BENEFITS, AND TOTAL BUDGETARY EXPENDITURES

CANADA 1935-1969

(Millions of Constant 1961 Dollars)

Year	Defence Expenditures	Veterans Benefits	Total Federal Budgetary Exp- enditures	Gross National Product (GNP)	Implicit Price Index 1961 = 100
1935	41	131	1,268	10,343	42
1936	50	132	1,267	10,801	43
1937	74	125	1,243	11,886	44
1938	78	126	1,257	11,984	44
1939	299	132	1,547	12,874	44
1940	1,635	127	2,717	14,687	46
1941	2,735	121	3,847	16,800	49
1942	7,172	129	8,437	19,917	52
1943	8,658	135	10,042	20,719	53
1944	8,034	207	9,537	21,539	55
1945	7,148	717	9,172	21,057	56
1946	668	1,043	4,542	20,493	58
1947	311	534	3,485	20,861	63
1948	379	390	3,065	21,374	71
1949	520	333	3,309	22,119	74
1950	1,043	289	3,868	23,809	75
1951	1,723	257	4,444	25,004	84
1952	2,242	274	4,929	27,398	88
1953	2,111	271	4,944	28,862	88
1954	1,897	270	4,804	28,283	89
1955	1,965	276	4,926	31,079	90
1956	1,918	270	5,214	33,718	93
1957	1,776	292	5,355	34,710	95
1958	1,503	301	5,588	35,462	96
1959	1,570	294	5,819	36,929	98
1960	1,557	295	6,018	37,994	99
1961	1,653	333	6,521	39,080	100
1962	1,588	332	6,505	41,778	101
1963	1,684	324	6,672	43,993	103
1964	1,496	333	6,810	47,050	106
1965	1,450	336	7,032	50,149	110
1966	1,475	340	7,635	53,650	115
1967	1,601	340	8,326	55,407	118
1968	1,456	348	8,754	58,041	123
1969	1,467	329	9,102	60,854	128 ^E

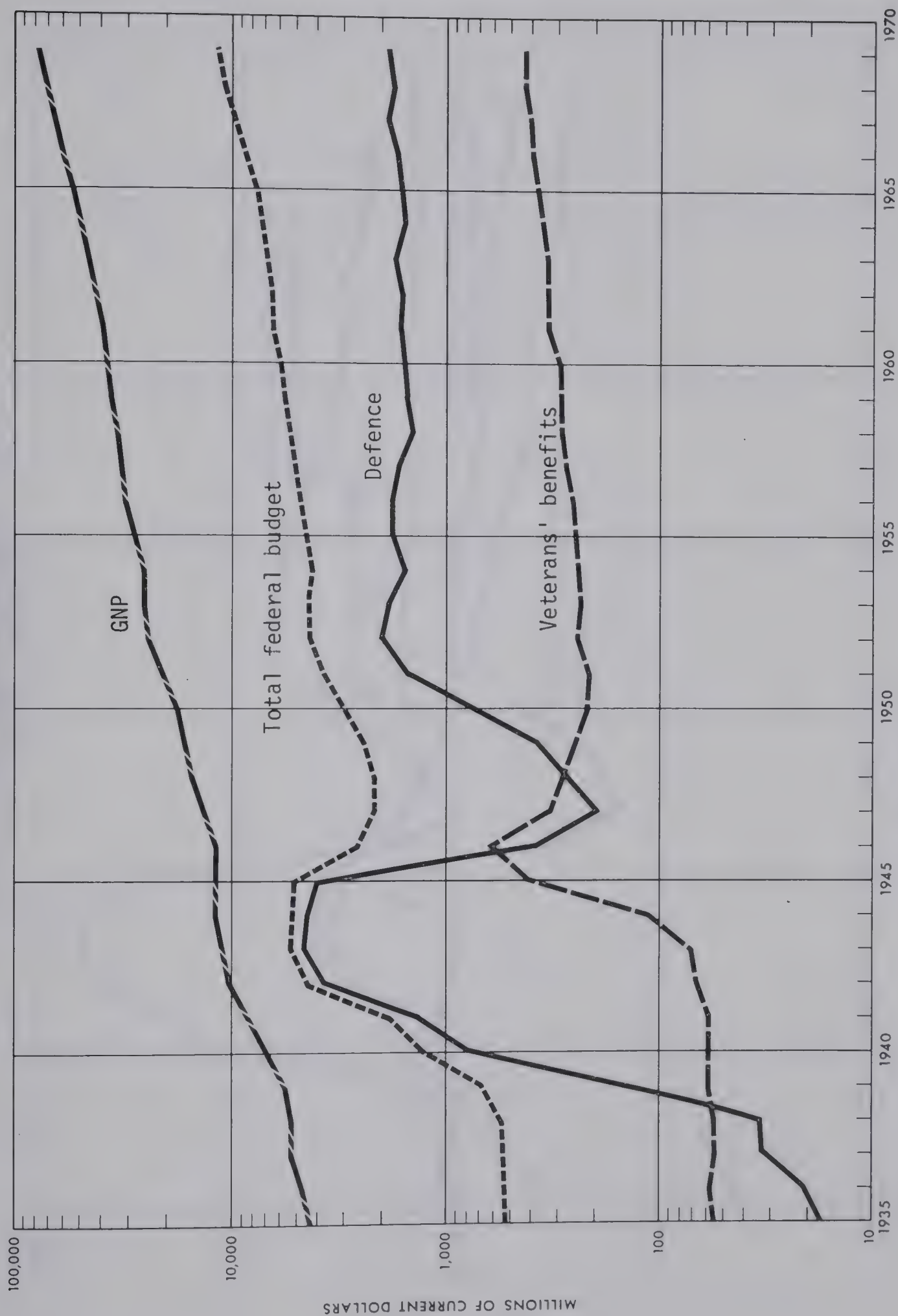
E = Estimated

TABLE IX (Continued)

Source (For the GNP data): DBS, System of National Accounts, National
Income and Expenditure Accounts, 1926-1968.
(Ottawa, August, 1969), Table C, pp.32-35.

(Other data): Calculations concurrent with Table I.

FIGURE 4 GROSS NATIONAL PRODUCT AND FEDERAL BUDGETARY EXPENDITURES¹
CANADA: 1935-1969

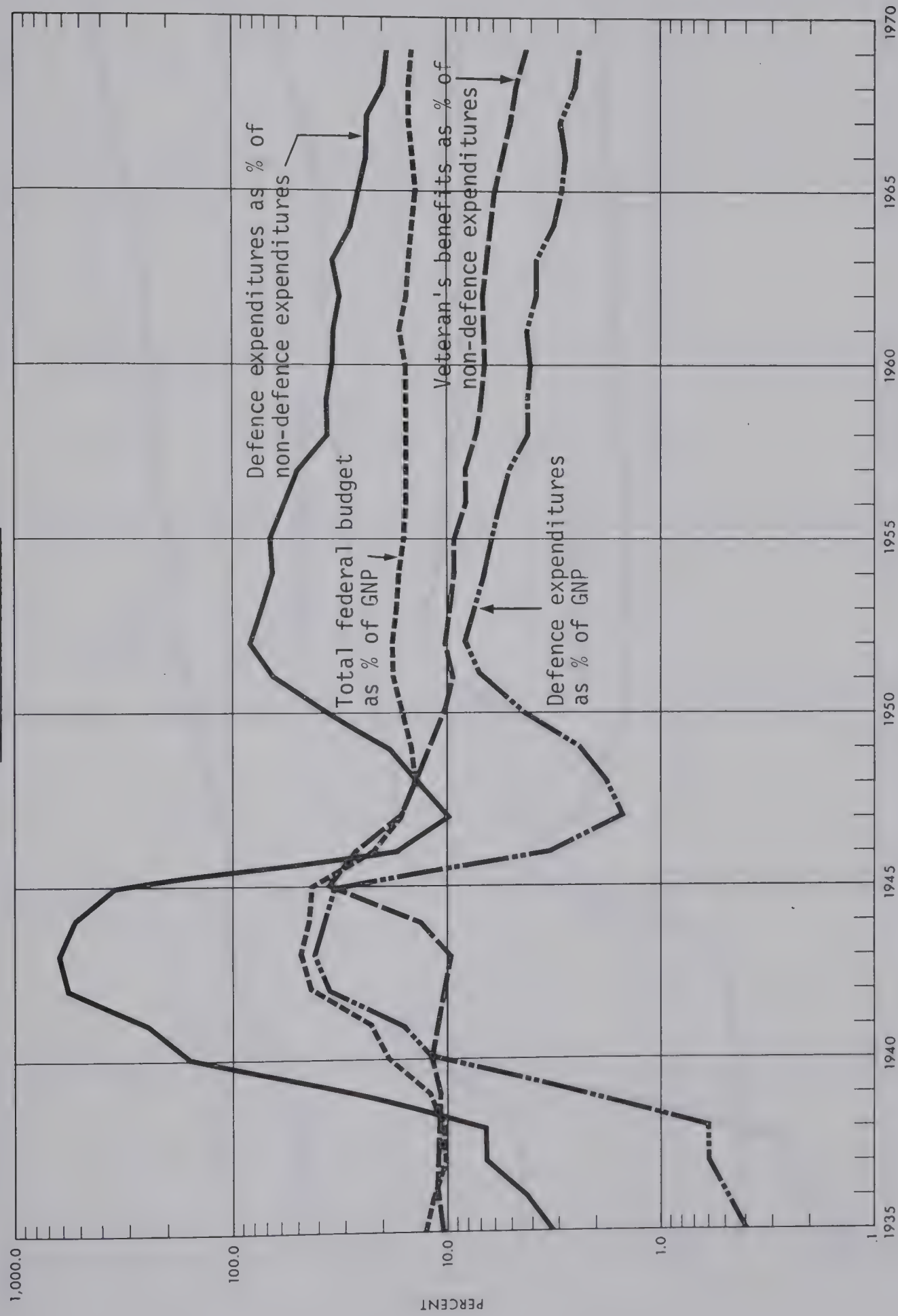


¹Based on data as presented in Table I

FIGURE 5

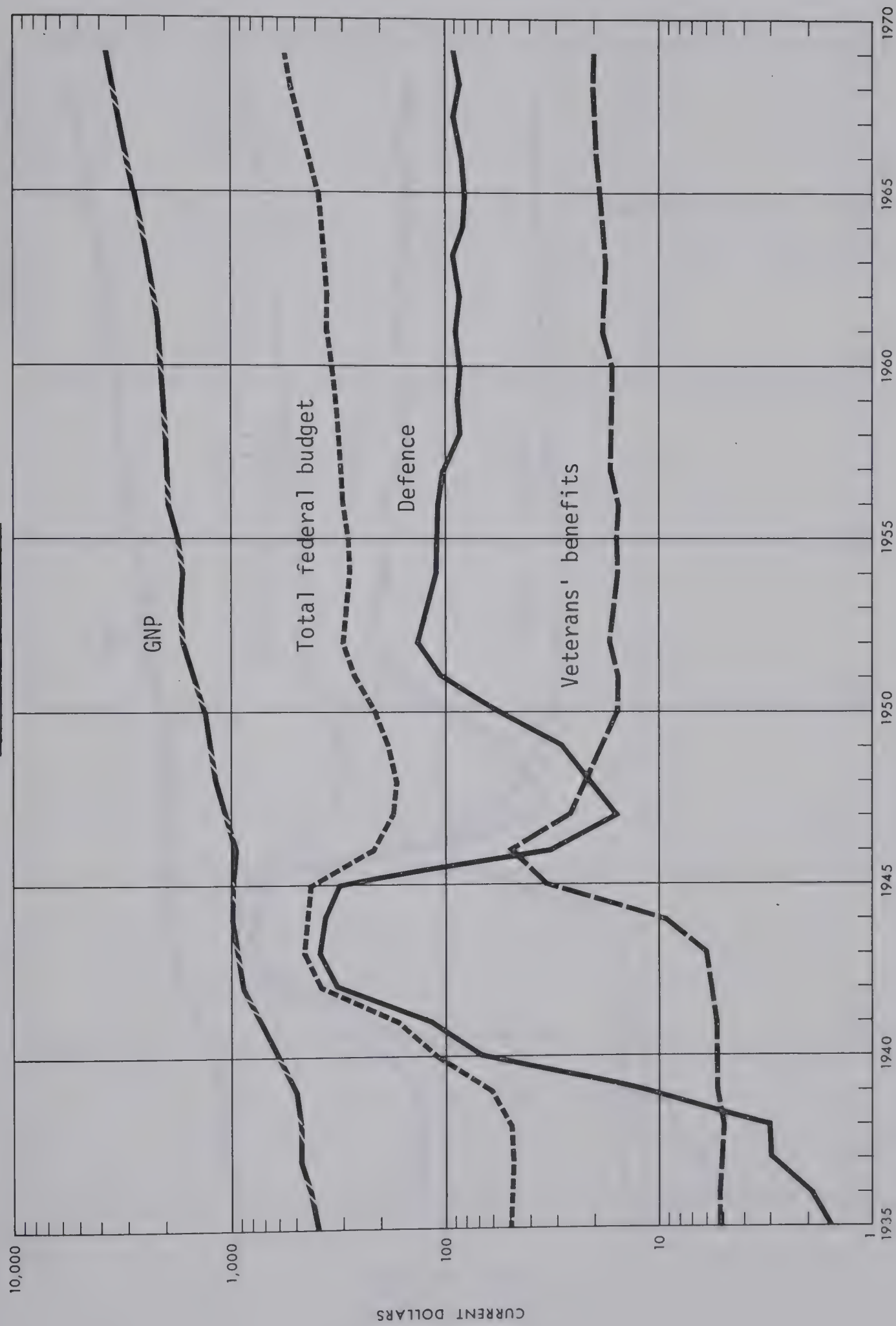
RELATIVE CHARACTERISTICS OF TOTAL FEDERAL BUDGET,
DEFENCE EXPENDITURES AND VETERANS' BENEFITS¹

CANADA: 1935-1969



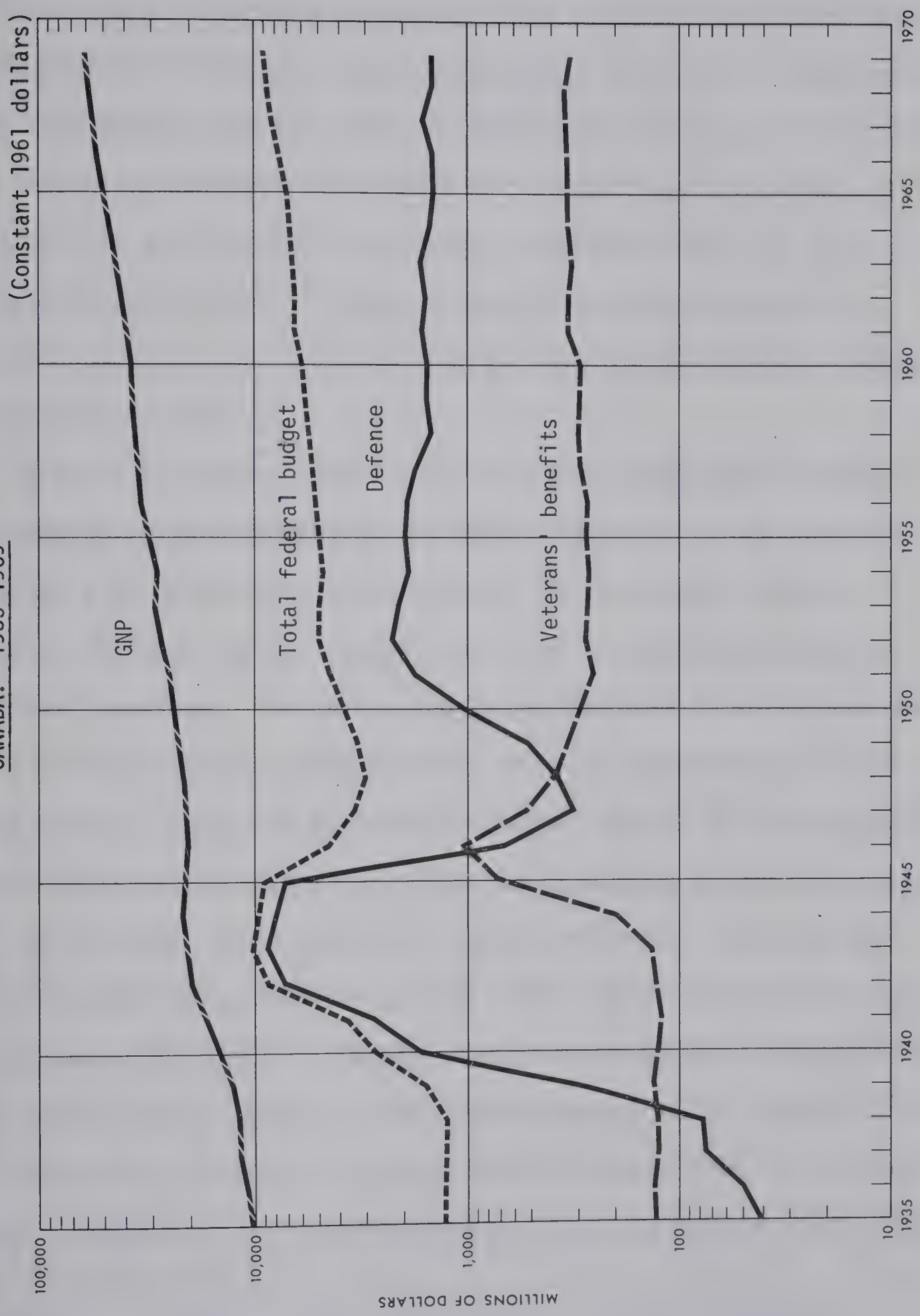
¹Based on data as presented in Table VII

FIGURE 6 GROSS NATIONAL PRODUCT AND FEDERAL BUDGETARY EXPENDITURES PER CAPITA¹
CANADA: 1935-1969



¹Based on data as presented in Table VIII

FIGURE 7 GROSS NATIONAL PRODUCT AND FEDERAL BUDGETARY EXPENDITURES¹
CANADA: 1935-1969



¹ Based on data as presented in Table IX

situation and increasing wages and salaries but offset by increasing taxes to pay for the war expenditures, and the short-run effects of heavy capital investments in war production. The capital investments that were made in the war years in addition to the progress in technology and industrial diversification have had a significant importance for the post-war era and "carried the country definitively into the ranks of the industrialized states".¹⁷ Many of these remarkable changes in the overall economy can be observed from the data in the National Income and Expenditure Accounts.¹⁸

What is of greater interest for this particular study are the outstanding characteristics of the Public Accounts for the war years. First of all, there were large increases in the absolute amounts allotted to cover the war expenditures, and the notable growth of veterans' benefits. The tables and charts included in this study show with great clarity trends and developments of these expenditures as well as their relative impact on government finance. Table IX is especially constructed for the modern period and is an attempt to show in constant 1961 dollars what Table I shows in current dollars. The major uncertainty with this table is that the price indexes derived from the two series of GNP-data in current and constant dollars, respectively, have been directly applied to the expenditure series in concern. Since the composition of GNP is different from the composition of the governmental expenditures it is well understood that the figures most likely

¹⁷ Kenneth McNaught, The Pelican History of Canada, p.269.

¹⁸ See the following newly released and condensed report, Canada, System of National Accounts, National Income and Expenditure Accounts, 1926-1968. (Ottawa, DBS, August, 1969), 35 pp.

contain inaccuracies to some extent.¹⁹

The defence expenditures during the inter-war period constituted approximately 2-6 per cent of the non-defence expenditures which was for that period in time regarded as at least close to a normal peace-time level of national security. Table VII shows the striking war-time contrast with about a hundred-fold increase in this relationship, in spite of the fact that the non-war expenditures did not decline but rather grew. Definite conclusions cannot be drawn, however, because of the arbitrary distinction between war and non-war expenditures. If the realistic assumption is made that the non-war expenditures contained expenditures directly connected with the war efforts, the change in relationship becomes obviously even more significant. The normal pre-war level of defence expenditures in relation to GNP was one half of one per cent or less - a percentage that increased to a peak in 1943 of nearly 42 per cent and then declined to about 34 per cent in 1945. The per capita expenditures are presented in Table VIII and show the same dramatic changes imposed by the war. Needless to say, the per capita expenditures on defence are to a degree artificial and can be misleading if the financial aspects of the war are not taken into consideration. On the other hand, this series would have been more significant if the employed labour force only had been taken into account. The per capita data in

¹⁹It is in practice possible to construct data series in constant dollars for the whole period 1867-1969, where especially for the time prior to 1926, O.J. Firestone's studies, Canada's Economic Development, 1867-1953 and Industry and Education, A Century of Canadian Development, can be utilized. Since some of the data in current dollars as presented in this study are already subject to shortcomings, at least for the earlier period, the decision has been made not to explore this possibility for the time being.

such a case would have been more than twice as high at any time since the labour force has never exceeded 50 per cent of the total population.

Table IX presents the data in constant 1961 dollars. The relative measurements as presented in Table VII do, of course, not change since all data in current dollars are deflated on the same basis.

War Financing. To finance the Canadian participation in the Second World War was much less of a technical problem than was the financing of the First World War. The government this time had the knowledge, gained from earlier experiences, and the necessary political machinery to obtain the funds needed to cover the extraordinary costs for the war. Important was also the confidence the leaders possessed that Canada was able to pay the war efforts from her own resources. There were chiefly two ways by which this war was financed -- the same two ways the expenditures were paid for during the latter half of World War I -- namely, taxation and borrowing. With the outbreak of the war, wartime tax agreements were made between the federal and provincial governments whereby the provinces gave up, for the duration of the war, the levying of personal income and corporation taxes.²⁰ Payments were made in return by the federal government to the provincial governments. This centralization of power was necessitated by the circumstances under which it was essential to the central authority to have full control over the revenue sources. In this way the total federal tax revenue was raised from 468.2 million dollars in 1939 to 2,436.8 million dollars in 1943.²¹ In terms of

²⁰Urquhart-Buckley, op. cit., p.188.

²¹Ibid., series G 13, p.197.

absolute amounts, borrowing was far more important, which is clearly indicated by the rapid increase in the government's total debt. From slightly over 5.1 billion dollars in 1939 it grew to almost 12.6 billion dollars in 1943 and further to about 18.4 billion dollars in 1945. Approximately 11.4 billion dollars of the total borrowing were issues of government bonds.²²

Summary of the war period. The immediate pre-war era was characterized by a slow recovery of the economy after the deep depression. Unemployment was high, with several programs for unemployment relief in operation. The defence forces were slowly building up from an earlier stage of almost complete deterioration. The North American continent reacted with increasing isolationism to the hostile and unstable situations in Europe and East Asia. At the outbreak of the war Canada took the position of limited liability with the intention of contributing with mainly economic means. The political situation and governmental actions were influenced by the bi-cultural conflict about conscription for overseas service. After the collapse of France in 1940 the policy of limited war efforts was abolished and Canada became a full participant in the world war. The three armed forces were rapidly equipped and manned and possessed considerable strength from 1943 and onwards. All three forces were heavily engaged in both Europe and Asia, and the cost in human lives reached almost 42,000. The economy flourished and the accumulation of wealth far exceeded the direct war expenditures and thus the standard of living increased considerably. A many-fold increase in industrial output, technological progress and diversification of production

²²Ibid., Series 45 and 60, p.203.

characterized the war years and these factors have been major contributors to the long and almost uninterrupted post-war economic boom.

The Canadian industry made a remarkable effort and O.J. Firestone concludes the following:

The two most remarkable achievements of the Canadian industry during World War II were its ability to: (1) convert fairly quickly from a peacetime to a wartime footing, capable of producing the most complex military hardware and equipment required; and (2) increase productivity even under the stress of great war pressures to such heights that it could provide very large quantities of munitions and supplies to Canada's own armed forces and those of her allies while at the same time providing enough goods for civilian consumption so that Canadians at the end of the war actually enjoyed a higher standard of living than they did at the beginning of the war.²³

The economic expansion is well exemplified by the growth of GNP that in current dollars more than doubled and in constant dollars almost doubled during the course of the war. The defence expenditures rose from a normal pre-war level of about 30 million dollars annually to a peak in 1943 of nearly 4.6 billion dollars. The war was financed from Canada's own resources through taxation and borrowing.

4:3 The Immediate Post-War Period, 1945-1950

When the hostilities ceased in 1945 there was in Canada a widespread concern about the future of the nation. The unfortunate development of the world-economy after World War I was recalled by many and created some fear. But lessons were learned and experience gained on the international level, at which Canada now possessed the status of a

²³O.J. Firestone, Industry and Education, p.36.

definite middle-power, so the conversion of the industry from wartime production to production for civilian demands went far smoother than after the Great War.²⁴ From a technical aspect this was due to a high level of skill and know-how won by large-scale war production and industrial diversification. The economic gains, primarily in Canada and the United States, created both international and domestic market demands for civilian goods. Both countries made considerable capital advances to war-damaged countries for reconstruction purposes. As a result exports flourished and gave further inducements to the economy.

In terms of manpower, approximately one million service men and women were absorbed back into the civilian economy in a remarkably short time, since the conversion was considered as fully completed by the end of 1947.²⁵ This took place without any notable degree of unemployment and also without a corresponding increase in the number of gainfully employed.²⁶ The latter factor can be explained by a considerable degree of withdrawals of temporary labor primarily from the female labor force, generous veterans' benefits, and the return of veterans to educational institutions.

The number of persons enrolled in the armed services decreased from 736,000 in 1945 to 37,000 in 1947, which indicates the magnitude of change for the economy in general and the defence structure in particular.²⁷ The corresponding change in budgetary terms was a drop of the

²⁴O.J. Firestone, Industry and Education, op. cit., pp.36-37.

²⁵Ibid., p.37 and Colonel C.P. Stacey, op.cit., p.297.

²⁶Urquhart-Buckley, op. cit. series 47-55, p.61.

²⁷Ibid., series 48, p.61.

military expenditures from slightly over 4 billion dollars in 1945 to 387.6 million dollars in 1946, and further down to their lowest post-war level of 196 million dollars in 1947 as can be seen from Table I. From Table IX it can be observed that the absolute decline in military expenditures in constant dollars was even more dramatic. Simple calculations from Tables I and IX reveal that non-military expenditures (excluding veterans' benefits) rose in current dollars by about 930 million and in constant 1961 dollars by over 1,300 million between 1945 and 1947. This considerable increase can not be properly evaluated due to the arbitrary distinction between military and non-military expenditures in 1945.

The first signs of a new peacetime military defence policy can clearly be traced back to this immediate post-war period. The most obvious indication is that the three forces were, although drastically reduced, maintained on a much higher level of strength than before 1939. Another indication was the deliberate continuance of some of the defence industries created during the war. The aircraft and ship-building industries, in particular, that were owned by the national government, were encouraged and given government orders.²⁸ It can be speculated that this new regard for peace-time military strength would have occurred even if the events on the international political scene had developed in a more favourable direction. It can not be taken for granted that the expanding gap between East and West, that led to the "Cold War", in itself was responsible for what could be called the new defence policy. What later

²⁸Colonel P.C. Stacey, op. cit., p.298.

developed in terms of various defence alliances can primarily be seen as an effect of conflict of interests between the big powers but also, in part, as a result of sheer determination to maintain armed forces of at least moderate strength in order not to be over-run by any nation. This discussion would then imply, in its extreme, that not even the potential existed immediately after the war for a peaceful and disarmed world.

The Soviet expansion in Eastern Europe started soon after the war and reached a climax in 1948 with the Communist take over in Czechoslovakia and the Soviet blockade of Berlin. These and other events gave rise to increasing fear of further Communist influence and expansion and led to the creation of the North Atlantic Treaty Organization in April, 1949. The new Canadian attitude towards international affairs was becoming clear, and had in fact been so for some time, since the government took an early lead in "forming some sort of western alliance to check the further advance of communism".²⁹ From there it did not take long for the defence expenditures to reach a much higher but reasonably stable post-war level. The following quotations express the general attitude that prevailed in the Canadian nation when the 1940's ended:

It is fair to say that at the end of the forties the climate of Canadian opinion in respect to the great question of war and peace was one of anxiety in a world of immobile positions and rigid attitudes.³⁰

and

²⁹Ibid., p.304.

³⁰William Kilbourn, "The 1950's" in Part One of The Canadians, 1867-1967, op. cit., p.328.

The Second World War and the advent of the atomic age had clearly had a powerful effect upon the outlook of the Canadian people and their government.³¹

4:4 Twenty years of nuclear threat and balance of power, 1950-1970

Introduction. When Canada entered the 1950's the open attitude to international affairs was clearly visible. At the same time the country entered a still prevailing era of collective security thinking with significant consequences. Military security arrangements with other nations have undoubtedly strongly influenced the pattern of international relationships, with economic, social and political implications. One basic shift in emphasis, with embryos back in the war years, could continuously be recognized. From having been primarily tied to Great Britain, particularly in defence matters up to the latter half of the Second World War, Canada became increasingly dependent upon the powerful United States. The Canadian government found in NATO a politically acceptable body to join for defence purposes and since both Great Britain and the United States were founding members, Canada was able to avoid a conflict around loyalty preferences. Out of the NATO framework grew the concept of "continentalism", which later led to a separate defence pact between Canada and the United States under the name of NORAD (North American Air Defence Command). "Behind this drift towards 'continentalism'," says one writer, "lay not only the alleged necessities of the Cold War but also certain preconceptions of Liberal policy-makers". One such preconception says the same writer "... was

³¹ Colonel C.P. Stacey, op. cit., p.305.

a compound of suspicion of British purposes and a profound distaste for independent initiative in foreign policy."³²

As an evident consequence of both bilateral and multilateral defence agreements, and Canada's close association with American foreign policy, Canada has undoubtedly reached a high rate of dependency upon the United States. The initial reasons for this, at least from a defence point of view, go back to the earliest post-war years with an almost immediate start of a new kind of war. This time it was called the Cold War - characterized by nuclear war threats, military alliances, and rearmament. The new doctrine of Balance of Power emerged from this situation -- a doctrine that most countries, regardless of size and power, seem to adhere to, not by choice but rather by lack of alternatives. As a member of both NATO and NORAD, Canada is directly involved in the power balance and with a somewhat liberal interpretation it can be said that the development of the Canadian defence expenditures after 1950 reflects a stabilization of the balance. It does not, however, reflect the long-run rate of increase of military expenditures that is experienced in several countries and in particular the super-power nations.

The Korean War. The first more serious local war with a "World War III potential" broke out in Korea in June 1950. Communist forces from North Korea invaded South Korea and the Security Council of the United Nations reached a decision to provide defence forces from voluntary member nations to resist the invasion. The Soviet Union, which most likely would have vetoed this decision, was at that time temporarily boycotting

³²Kenneth McNaught, The Pelican History of Canada, op. cit., pp.282-83.

the organization. Canada was one of sixteen participating UN-nations and contributed the third largest force exceeded only by those of Britain and the United States.³³ As can be seen from Table I and Figure 4, the military expenditures showed a marked upward trend already prior to the war and during the course of the conflict there was a five-fold increase in the defence expenditures - from 385 million dollars in 1949/50 to 1,973 million dollars in 1952/53. The 1952 peak has not yet been exceeded. In terms of constant dollars these trends and developments were even more pronounced as can be seen from Table IX and Figure 7.

The rapidly deteriorating East-West relations and the outbreak of the war led to the establishment of a three-year defence program of approximately 5 billion dollars. The industry in general and three industries in particular received a great stimulus from the rearmament program.³⁴ The three industries that benefitted most were the aircraft, electronics and ship-building industries. Jet aircrafts including engines, were built for the first time as well as a wide variety of radar and radio equipment and new increasingly sophisticated naval vessels.³⁵

For the third time in less than thirty-five years Canada experienced a significant economic expansion induced by a war. In terms of current dollars, GNP increased from 16.3 billion dollars in 1949 to over 25.3 billion in 1953 - a rise of about 55 per cent in four years. This growth was considerably offset by inflation and in terms of 1961 constant

³³William Kilbourn, op. cit., p.328 and George W. Brown, Building the Canadian Nation, Volume II, 1850-1967, MacFadden Book, (New York: MacFadden-Bartell Corporation, 1968), pp.269-70.

³⁴O.J. Firestone, Industry and Education, p.38.

³⁵Ibid., p.38.

dollars the growth of GNP over this period was reduced to about 24 per cent, which was still a remarkable gain.

Canada's military role in the United Nations. The Canadian military contributions to the United Nations' peace-keeping operations at all appropriate occasions must be placed within the wider framework of the collective security thinking. The Canadian aid in this respect has been substantial and in fact Canada has actively taken part in every peace-keeping operation since 1948 on behalf of the United Nations.³⁶ The costs associated with these operations have partly been borne by the defence budget and partly by the United Nations. These expenditures have been small, indeed, in proportion to the total defence budget, with the exception of the engagement in Korea --slightly over 10 million dollars annually over the last few years or approximately one half of one per cent of the total defence expenditures.³⁷

The post-Korean War period 1953- . For the purpose of this study and from the point of view of defence expenditures and the generally prevailing military-political doctrines, primarily the balance of power and collective continental security, that Canada adheres to, it is suitable to review this open-ended period as a whole. In some respects this last period of the study is reasonably homogeneous with relatively small deviations in the defence expenditures and stable Canadian international relations. Only very recently, steps have been taken that can be regarded as departures from the "old" defence policy, as for example

³⁶George W. Brown, op. cit., p.270.

³⁷Canadian Tax Foundation, The National Finances, 1969-70, (Toronto: October, 1969),p.73.

partial withdrawals of Canadian forces from Western Europe and reductions in the number of military personnel in Canada, steps that have resulted in much speculation. Another action that has been seriously considered as a consequence of the adoption of a new defence policy is an attempt to freeze the budget of the Department of National Defence over the next three years.³⁸

The Canadian attitudes towards continental defence policy were probably strengthened rather than weakened during and after the Korean War. The military technology progressed rapidly and the Soviet Union was soon in possession of super-sonic long range bombers equipped with nuclear weapons, and some time later it was also announced that an inter-continental ballistic missile, able to carry nuclear war heads, was developed and in production. There is much evidence that the United States was taken by surprise and the technological advancements in the U.S.S.R. were considered in some Western quarters to have tipped the balance of power over to the Russian advantage.³⁹

With weapons of this magnitude and properties, possessed by both super-powers, Canada became the buffer state on the most probable bomber and missile path. This consideration, in the midst of the cold war, of such importance to both Canada and the United States did not give Canada much of a choice when Washington proposed the schemes of northern air defence. Negotiations culminated in the signing of the agreement to build a series of radar stations across Canada. These were joint

³⁸Ibid., p.71.

³⁹See for example: James Eayrs, Northern Approaches, (Toronto: The Macmillan Company of Canada Limited, 1961), pp.17-21.

projects but entirely paid for by the United States. A joint northern air defence command was set up in 1957 leading to the signing of the NORAD-agreement in 1958.⁴⁰ The last Canadian attempt to develop a major weapon for the NATO-forces was the project to build an all Canadian fighter-interceptor aircraft-- the CF-105 Avro Arrow. This project cost the tax-payers nearly 400 million dollars before it was cancelled for various reasons among which the immense costs and lack of buyers were important.⁴¹ The defence commitments the Diefenbaker administration made in 1957 brought Canada to the edge of becoming a nuclear power. By 1963, 685 million dollars had been spent on weaponry and equipment designed to receive nuclear war-heads. The decision was finally made not to purchase the war-heads which led to the resignation of three ministers and some days later the fall of the Diefenbaker government.⁴²

This series of selected events over approximately a period of a decade is presented with the purpose to show (a) the probable case that Canada by circumstances has never had any feasible alternatives in her defence policy other than to follow the path designed by the United States and (b) why the defence expenditures did not fall more sharply after the Korean War.

As regards (a), this question falls mainly outside the scope of this study, but since the economic implications of it provide some

⁴⁰William Kilbourn, op. cit., pp.331-32.

⁴¹James Eayrs, Northern Approaches, op. cit., pp.21-30.

⁴²Laurier L. LaPierre, "The 1960's" in J.M.S. Careless and R. Craig Brown, op. cit., pp.346-47.

explanatory variables to (b) it is necessary to include in parts.

The claim can not and will not be made that Canada is completely dependent upon the United States in defence policy matters.⁴³ Although close to total dependence there is enough evidence all through this period and particularly in recent years, that independent decisions can be made. It must also be kept in mind that inherent in any collective defence agreement is some degree of abandonment of independence for the benefit of interdependence and reliance. Canada has voluntarily, although sometimes under pressure, chosen to follow the path towards collective security and as a small power compared to her neighbour she must be prepared to give up a considerable degree of sovereignty. The fact that Canada constitutes the physical northemshield of the United States can not be neglected in terms of American dependence upon Canada. It is possible that Canada has for some years had a better military protection than what is reflected in the defence budgets with the eventual difference paid for by the United States, obviously mainly for her own protection.

What Canada pays for in terms of defence, however, is to a large extent the commitments she has tied herself to in the past, primarily included in the NATO-agreement of 1949 and the NORAD-agreement of 1958. With the exception of 1958/59 the defence budgets have stayed within the range 1.5-1.9 billion dollars since 1953. This is in terms of current dollars for which the long-run trend is characterized by stability, as can be seen from Figure 4. This gives an immediate hint that the trend

⁴³On an overall basis it is officially estimated that approximately 20 per cent of independence remains to Canada in her relations with the United States. (Kenneth McNaught, A Pelican History of Canada, op. cit., p.288).

in constant dollars is sloping downward which is also verified in Table IX and Figure 7. Even more striking are the relative characteristics in Table VII and Figure 5. Defence expenditures expressed as a percentage of non-defence expenditures have fallen from 83.4 in 1952 to an estimated 19.2 in 1969. Their proportion to GNP has decreased from 8.2 per cent in 1952 to estimated 2.4 per cent in 1969. At the same time it can be seen that the total budgetary expenditures, including defence expenditures expressed as a percentage of GNP has dropped only slightly over the same period. Simple calculations from Table I reveal that the non-defence expenditures as a percentage of GNP have increased from 9.7 per cent in 1952 to 12.5 per cent in 1969.⁴⁴

The per capita expenditures on defence and the other economic variables show very much the same trends where the slight differences are attributable to the continuous growth of the population.

Another factor that must be given some weight in regard to trends and developments of the defence expenditures is the structure of the expenditures. In one special study it was estimated that in 1962 about half of Canada's military budget went directly into pay and allowances of civilian and military personnel.⁴⁵ From the 1969/70 budget estimates one finds that military and civilian pay and allowances constitute at

⁴⁴The expenditures for veterans' benefits have merely been included for the sake of comparison. These expenditures show in principal the same trends and development mainly because of a continuously decreasing number of recipients. The trend is somewhat offset by regular index-adjustments of the pensions.

⁴⁵E.G. Adams, "Economic Effects of Disarmament - the Example of Canada," in International Institute for Peace, Economic Aspects of Disarmament, (Vienna, Austria: April, 1963), p.58.

least 50 per cent and possibly as much as 55 per cent of the total defence budget. This means that more than half of the budget increase between these two years go to salaries and allowances. Since the number of personnel has been continuously decreasing during this period it is reasonable to assume that the absolute budget increase is spent on both inflation adjusted pay and allowances and on an increasing number of more highly paid skilled personnel.⁴⁶ This would then indicate that increasing funds must be allocated in order to just maintain the same level of labour efficiency leaving a minor part of a budget increase for materials and construction. In case of no increase or a decrease of the budget, which has happened several times since 1952, the capital spending on material and construction is supposedly far less than only the defence expenditures would indicate. The purpose of this brief discussion is solely to establish in which direction the implications of this consideration works in terms of recent downward trends in the defence expenditures. A similar consideration may have influenced recent proposals to reduce the number of civilian and military personnel in the Canadian armed forces and thereby substitute labour intensity with capital intensity.

4:5 Summary

This last period of twenty years, started on the heights of the Cold War and in the midst of the intensive creations of collective defence alliances. This period saw the growth and maturity of the doctrine of

⁴⁶Bank of Canada, Statistical Summary, (Ottawa: December, 1962 and December 1969.)

power balance that most countries adhere to and very few depart from. When the Korean War broke out Canada volunteered to participate and contributed the third largest combat force among the 16 participating UN-forces. A three-year defence program of some five billion dollars was launched that particularly stimulated the manufacturing industry and also greatly influenced the economy. The defence expenditures increased rapidly and reached a post-World War II peak in 1952 of almost 2 billion dollars. Heavy military peace-time commitments after the Korean War have held the military expenditures on a relatively constant level up to date. Relative measurements and absolute measurements in constant dollars reveal that the defence expenditures were to be considered high in the beginning of the period whereas those at present may be regarded as moderate. This implies that the defence expenditures have declined in terms of constant dollars and also relative to GNP and non-defence expenditures. Recent proposals have been made to freeze the defence expenditures at approximately 1.8 billion dollars, which is also the present level, for three years. This new defence program also includes partial withdrawals of Canadian forces in Europe and reduction of civilian and military personnel within the armed forces.

CHAPTER V

CONCLUSIONS AND FINDINGS

5:1 Introduction

In this last part of the study an attempt is made to link the two major periods together primarily in order to present an overall view of the defence expenditures for the past one hundred years of Canadian history. The analysis of the data is finished and what remains is basically a linking procedure of integration of the periods. Since the level of defence spending is closely related to the current defence policy, the latter has been a factor of consideration. Defence policy in turn is derived from a large set of factors of which some primary ones are, the economic strength of the nation, international relations, the global power structure and the geographical aspects. These four factors constitute integral parts of the analysis and, as can be seen, the importance of each individual of these variables has changed over time. This study has been able to qualify and to some extent quantify that there is an inter-relationship between the size of the defence budget and some of the other mentioned variables. This question is evidently far more complicated than what appears in this study and only the most apparent characteristics are examined and reviewed which is consistent with the scope of this work.

5:2 Current Defence Policy and Expenditures

Great caution must generally be observed with the term defence policy as a distinct concept. This is particularly true for Canada and most other

small and middle powers at any time. The true meaning of the word defence has been observed in formulating the Canadian defence policy keeping in mind the flexibility of the term "sphere of interest to be protected". In the early years of the Confederation this was a relatively simple matter that consisted of protecting constitutional rights within the legal borders of the country. This attitude was strongly prevailing in Canada up until at least the First World War which was apparent at the Colonial conferences and at several other occasions when the Canadian government was reluctant to provide military support to British wars. The level of defence spending prior to 1914 was signified by the policy of military commitments solely on a national basis. These commitments could be kept limited because of the geographical distance to any possible enemy and the remote possibility of external aggression. The defence expenditures were in all respects insignificant previous to World War I and thus did have very little influence on the overall economy. However, the long-term trend was upward and consistent with the growing economy. The erratic development of the defence budgets during the first 50 years indicates, (a) that there was a lack of long-term economic planning of military defence and (b) a tendency to allot funds to the defence budget according to what could be afforded while other functions with higher priorities supposedly received what they needed. However, a reservation should be included in (b) since, especially in case of defence, "what could be afforded" and "what was needed" were not necessarily mutually exclusive.

The First World War saw a temporary change in the defence policy since the mother country of the British Empire, and thereby the whole

Empire, was in danger. The Canadian contribution to the war was considerable and created a strain on the economy, particularly during the first half of the world conflict. Canada and most other nations were largely unprepared for this war, the magnitude of which nobody could predict. The Canadian participation in the First World War can be seen as a contribution of loyalty to the Empire, and a defence of constitutional rights within a common sphere of primarily geographical interests. In this limited sense World War I was traditional and in absence of the latter years' immense ideological differences.

Immediately after the war Canada isolated herself again in terms of military commitments, which is also indicated by the series of very moderate defence budgets over the entire inter-war period. Although the absolute level, and in particular, the pattern of the trend indicates that the economic conditions most likely had a stronger influence on the defence budgets than had the defence policy per se, in the inter-war period. At the end of the 1930's, when a major conflict appeared evident, the isolationistic defence attitude became official with the policy of limited liabilities. The adoption of this policy was much influenced by the reactions of mainly the French-Canadians against the conscription for overseas service. After the fall of France in the summer of 1940 the policy of limited war efforts was abandoned and a new era in Canadian defence thinking began. Canada became a full participant in the war and the economy was converted into a war economy with rapidly rising appropriations to the armed forces.

The political development on the world scene almost immediately after the war split the allied forces into two halves with the United

States and Soviet Union as, to a large extent, the self-appointed leaders. The joint struggle against Nazism and Fascism turned into a still prevailing deep conflict between two economic-political systems; capitalism and communism. Historically, the conflict was at least as old as the two systems but reached after the war an intensity never before experienced. The collective war efforts were transformed into collective security thinking in both west and east and resulted in two major pacts; NATO and the Warsaw pact, respectively.

Canada was one of the major initiators of NATO which clearly indicates the total departure from the pre-war isolationistic attitudes towards military defence. Within the conceptual framework of collective security policy and as a consequence of the development of inter-continental supersonic air-crafts and ballistic missiles, the NORAD-agreement was signed between Canada and the United States. This agreement completed the continuous shift of emphasis from dependency on Great Britain to dependency on the United States in defence matters.

The Canadian participation in the Korean War led to rapid increases in the defence budgets between 1949 and 1952, and with increasing commitments within NATO and later NORAD a new peacetime level of defence expenditures was established. This level is far higher than any other peacetime level of defence expenditures experienced before. In relative terms, as shown in tables and figures, the defence expenditures are fairly constantly declining, and will continue to do so if the present defence budget of approximately 1.8 billion dollars will be frozen at that level for three years as proposed and if GNP and non-defence expenditures continue to rise. The long-term trend of defence outlays expressed in

1961 dollars is also falling. This development could indicate that Canada is not accepting any more additional military commitments involving direct expenditures, at least as long as there remains a balance of power. Further, implicit in this reasoning are two possible conclusions, (a) a long-term shift of policy towards more limited military liabilities, and (b) in the minds of the Canadian government, balance of power should increasingly become a matter of adjustment for the super powers.

5:3 Current Economic Strength and Defence Expenditures

As pointed out above, one of the major factors determining the current defence expenditures is the economic strength of the country. The purpose of this study has not been to quantify this relationship but rather to qualify it. It has also been qualified that during certain periods in the modern Canadian history the appropriations to the defence budgets in combination with "war-time variables" have greatly influenced the over-all economy. Canada has with great certainty experienced three of those periods with all possibility of a fourth at present, although difficult to document -- that of possible arms sales to the United States for use in South East Asia.

It is a well known fact that the development of the Canadian economy was very erratic up to at least the end of the last century.¹ The long-run trend, though, was upward. Without having established any quantified relationship, it can at least be said that the defence expenditures were

¹The GNP-data for this period in this study well indicates the character of the development of the economy. However, caution must be observed as regards to the absolute level of the figures.

signified by the same development. From 1896 up to 1920 the growth of GNP was more consistent and also more significant. The defence budgets followed in principle the same path up to the out-break of World War I.

Additional revenues were raised with great difficulties to pay for the extraordinary war expenditures and at the same time significant inducements were given to the agricultural and industrial sectors of the economy that led to a rapid growth of GNP. In addition to all disadvantages, Canada could also experience war-time advantages in the form of large economic benefits. Naturally, the defence expenditures fell sharply after the war and so did GNP during a short recession in 1920/21. The economic growth during the 1920's was moderate and the level of defence expenditures was kept low with a slow upward trend. The economic recession of the 1930's is also clearly reflected in the defence budgets. From the 1933 turning point of the economy and onwards the defence expenditures increased faster than GNP, but were still insignificant up until the Second World War.

With the outbreak of the war the appropriations to the Department of National Defence rose very rapidly and the economy was greatly stimulated. With full employment and high productivity the growth of GNP was notable--approximately 10 per cent average annual compound growth between 1939 and 1944 expressed in terms of constant 1961 dollars. As was the case during the First World War it was again proven that hostile world conditions were, in an entirely economic sense, beneficial to Canada. The economy showed great adaptability to the peace-time conditions after the war and no major slack occurred. For natural reasons the defence expenditures declined rapidly when the war ceased and reached a post-war low in the fiscal year

1947/48.

The Cold War started almost immediately after World War II and led to a world wide rearmament race that for Canada, in terms of defence expenditures, culminated during the Korean War. A rearmament program in excess of 5 billion dollars over a period of three years again proved to be a prime inducement to the economy as a whole and in particular to the manufacturing industries. This is reflected in the high rate of growth of GNP between 1949 and 1953. The short economic recession after the Korean War was accompanied by a slight decrease in the defence allotments and from about 1954 and up to date the defence budgets have been stabilized within the approximate range of 1.5-1.8 billion dollars.

During the same period GNP has more than tripled in terms of current dollars and more than doubled in terms of constant 1961 dollars accompanied by an unquestionable standard of living increase. Thus, it is appropriate to conclude that military defence at present is less expensive for Canada than it was in the beginning of the 1950's and in fact evidence has been presented in this study that the cost of military defence, relative to GNP, has been falling for 18 consecutive years with the possible exception of two years; 1960-61 and 1966-67. This trend is likely to continue for at least another three years.

Both political and economic factors contribute to this significant trend and in conclusion it might be stated that among the more important political factors are, (a) the relative stabilization of balance of power and slightly improving east-west relations, and (b) that defence of Canada is in terms of modern warfare equivalent to defence of North America and thus primarily a responsibility for the United States. Among the economic

factors the following might to a reasonable extent explain the relative decline in the defence expenditures, (a) military economic efficiency is achieved through standardized large-scale production of defence equipment, (b) peace-time defence production on a moderate and stable level in conjunction with continuous military research contributes to a high state of readiness and easy conversion to war-time conditions, and (c) hidden and indirect expenditures, and opportunity costs-- granting the use of land to an ally for military installations with defence benefits, at the expense of independence and sovereignty.

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